User's Guide

TRENDnet®

Outdoor PoE Megapixel Day/Night Internet Camera

TV-IP302PI

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Product Overview

TV-IP302PI

Package Contents

- TV-IP302PI
- Multi-Language Quick Installation Guide
- CD-ROM (Utility, Software & User's guide)
- Power adapter (12V DC. 1A) (1.5M / 5 ft.)
- Network cable (1.5 M/ 5 ft.)
- RJ-45 coupler
- Camera Mounting hardware

Features

The Outdoor Megapixel PoE Day / Night Internet Camera, model TV-IP302PI, provides powerful megapixel night vision in complete darkness for up to 15 meters (50 feet). This camera is outdoor ready with an IP66 weather rated housing. The compact aluminum enclosure, a mere 4 inches long (10 cm), comes with an adjustable sun visor.

Product Hardware Features

Camera Overview

- **Shield:** It is used to protect the camera for the inclement weather.
- **IR Lens**: IR lens for the camera.
- **Camera Stand**: the mounting stand to hold the camera.

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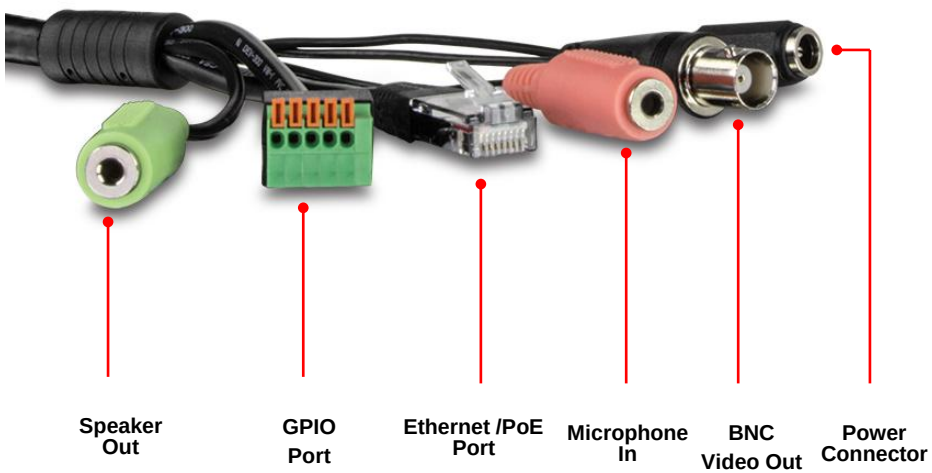
Camera Connectors



- **Power Connector:** Connects the power adapter to supply power to the camera if using non-PoE connection
- **BNC Video Out**: Connect a CRT monitor or handheld monitor.
- **Microphone In**: Connects an external microphone to receive the on-the-spot sound where the camera is installed.
- **Ethernet/PoE Port:** Plugs the network cable to connect to your local area network (LAN). If you are using the PoE, you must have the network cable connect to your PoE switch or PoE Injector.
- **GPIO Port**: Connect external device. Please refer to I/O setting paragraph. It's also used for IP camera reset. Please refer to Factory Default paragraph.
- **Speaker Out**: Connects an external audio device (such as the active speaker) to deliver sound via the camera.

Application Diagram

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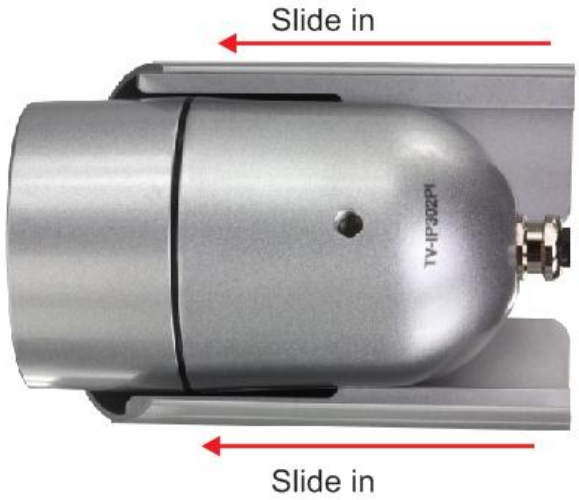
Installation

Hardware Installation

Shield Installation

1. Align the notches on the sides of the IP camera to the shield.

2. Once both notches are aligned with the shield, slide th4e shield forward.



3. Adjust the IP camera to fit the shield.

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Bracket Installation

1. Turn and lock the bracket into the mounting hole of IP camera. Use screws to fix the bracket to ceiling or wall, and turn the knob tightly to fix the angle of camera.

LED Indicator

The green LED will be flash when power on the camera and if there is the data transmission.

Waterproofing

The camera is designed featuring waterproof. However, you need to protect the connectors from water soak. For example, you can tape the junction points of the connectors while you connect the cables or purchase a weatherproof cable/power cord protector.

Camera Installation

1. Insert the Installation CD-ROM into your computer's CD-ROM drive to initiate the Auto-Run program. Click the Install Camera.

2. Write down the MAC ID of the camera.

TRENDnet | TV-IP302PI
Write down the MAC address of your camera
This information is required in the installation process. The MAC address is located on the camera label (shown in photo below).
MODEL: TV-IP302PI / A
POWER: DC 12V,1A
S/N: XXXXXXXXXXXX
MAC: XXXXXXXXXXXX
MADE IN TAIWAN
TV-IP302PI
Home
Back
Next

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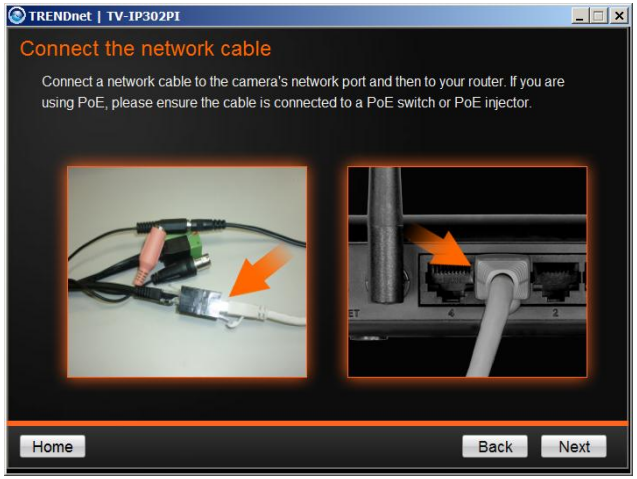
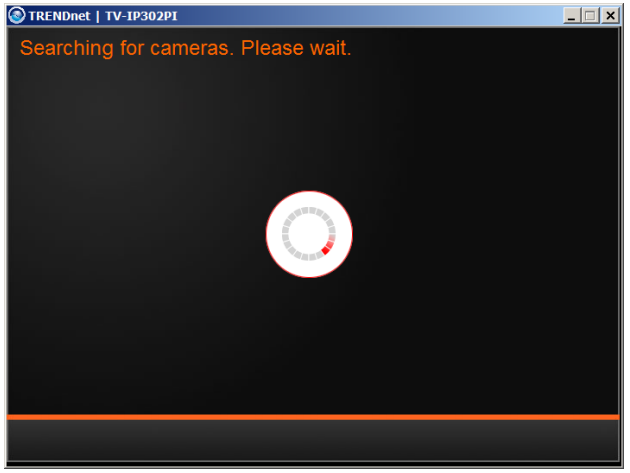
3. Plug in and connect the power adapter to the camera. If you are using the PoE to supply power to the camera, please skip to the next step. Click **Next** when you are done.

TRENDnet | TV-IP302PI
Power up the camera
If using PoE to supply power to the camera, please skip to the next step.
Plug in and connect the power adapter to the camera. The green LED on the camera indicates it is powered. Allow 60 seconds for the camera to boot up.
Home
Back
Next

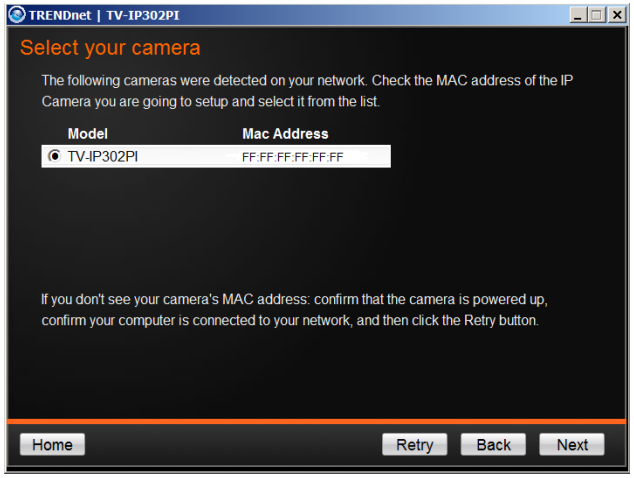
4. Connect a network cable to the camera's network port and then to your router. If you are using PoE, please ensure the cable is connected to a PoE switch or PoE injector.


TRENDnet | TV-IP302PI
Connect the network cable
Connect a network cable to the camera's network port and then to your router. If you are using PoE, please ensure the cable is connected to a PoE switch or PoE injector.
Home
Back
Next

5. Wait while camera is searching.



6. The founded cameras will show on the screen. The camera already selected by default if you have only one camera installed. If you have more than one camera in the same Network, you will need to identify the camera by the MAC ID. Click **Next**.


TRENDnet | TV-IP302PI
Select your camera
The following cameras were detected on your network. Check the MAC address of the IP Camera you are going to setup and select it from the list.
Model
Mac Address
TV-IP302PI
FF:FF:FF:FF:FF:FF
If you don't see your camera's MAC address: confirm that the camera is powered up, confirm your computer is connected to your network, and then click the Retry button.
Home
Retry
Back
Next

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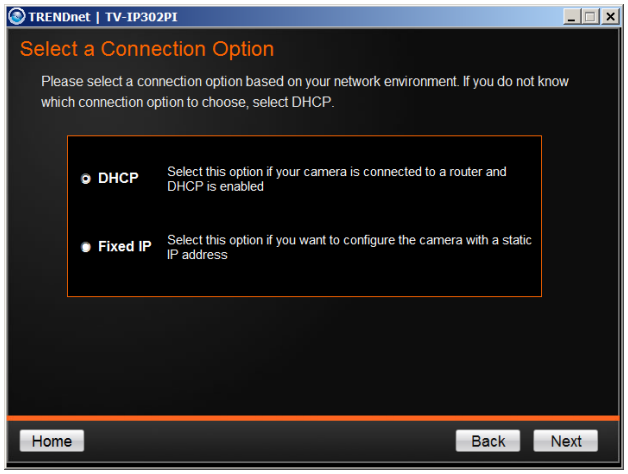
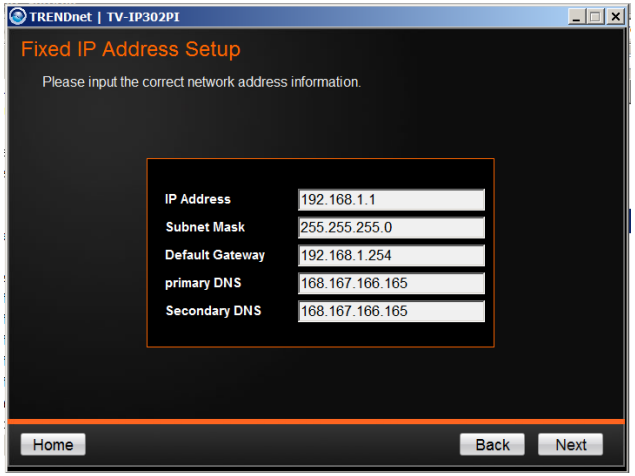
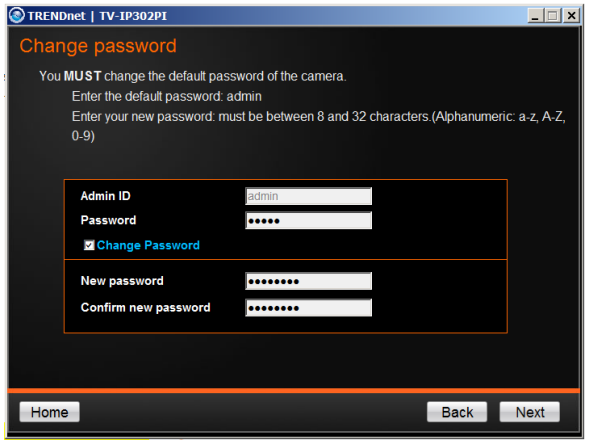
7. Select "DHCP" option to assign an IP by DHCP server or Select "Fixed IP" to set IP address manually. Click **Next**.


TRENDnet | TV-IP302PI
Select a Connection Option
Please select a connection option based on your network environment. If you do not know which connection option to choose, select DHCP.
DHCP
Select this option if your camera is connected to a router and DHCP is enabled
Fixed IP
Select this option if you want to configure the camera with a static IP address
Home
Back
Next

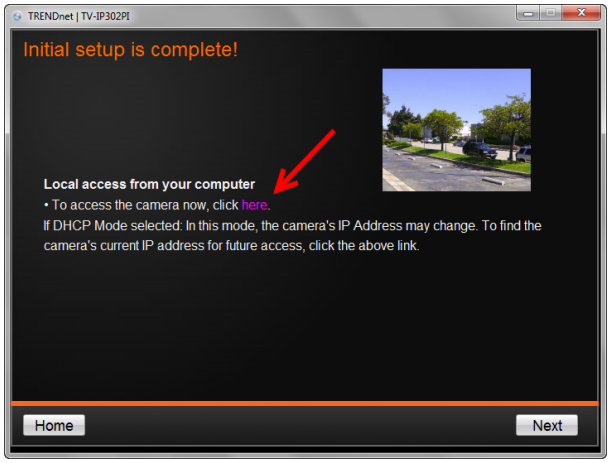
8. If you select "Fixed IP", fill out the IP address, subnet mask, default gateway, DNS server. Please ensure that the IP address of the camera and the computer must within the same network. Click **Next**.



9. Type in the Password. The default password is "admin". You must change the default password of the camera. Enter the default password: admin and enter the new password. The password must be between 8 and 32 characters. (Alphanumeric: a-z, A-Z, 0-9), and confirm the new password by entering the password twice.



10. Click "**here**" to access to the camera's web page or click **Next.** It is recommended that you access the IP camera now if it was using a DHCP connection.


TRENDnet | TV-IP302PI
Initial setup is complete!
Local access from your computer
• To access the camera now, click here.
If DHCP Mode selected: In this mode, the camera's IP Address may change. To find the camera's current IP address for future access, click the above link.
Home
Next

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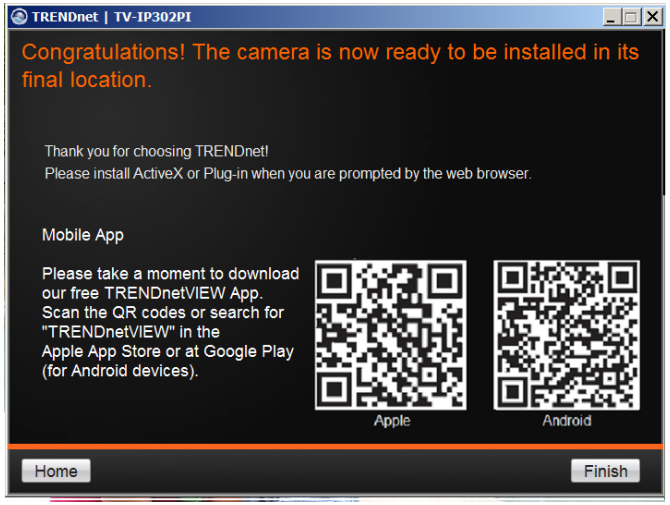
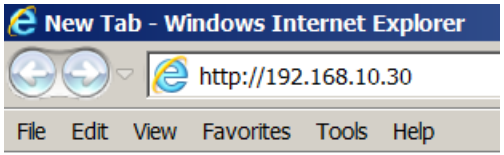
11. Click **Finish** to exit the program or click **Home** to return to the main screen. This device also supports the Mobile App. Using your mobile device to scan the QR code to install the App.


TRENDnet | TV-IP302PI
Congratulations! The camera is now ready to be installed in its final location.
Thank you for choosing TRENDnet!
Please install ActiveX or Plug-in when you are prompted by the web browser.
Mobile App
Please take a moment to download our free TRENDnetVIEW App.
Scan the QR codes or search for "TRENDnetVIEW" in the Apple App Store or at Google Play (for Android devices).
Apple
Android
Home
Finish

Configuration

Viewing Camera Basic Function

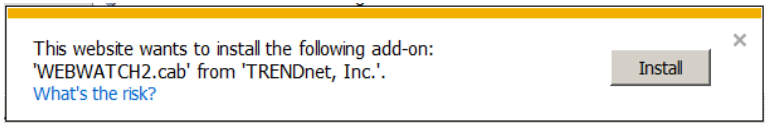
Open the Web browser on your computer (example showed in this User's Guide is based on the Internet Explorer). In the Address bar, type the IP address you got from "Camera Installation" chapter or found by IP Installer, and then press [Enter].



When the login window appears, enter the User name (admin) and Password and press OK to access to the main screen of the camera's Web Configuration.

Windows Security
The server 192.168.10.30 at netcam requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name
Password
Remember my credentials
OK
Cancel

Note: if you are initially access to the camera, you will be prompted to install a new plug-in for the camera. Permission request depends on the Internet security settings of your computer. Click **Allow** and **Install** to process.



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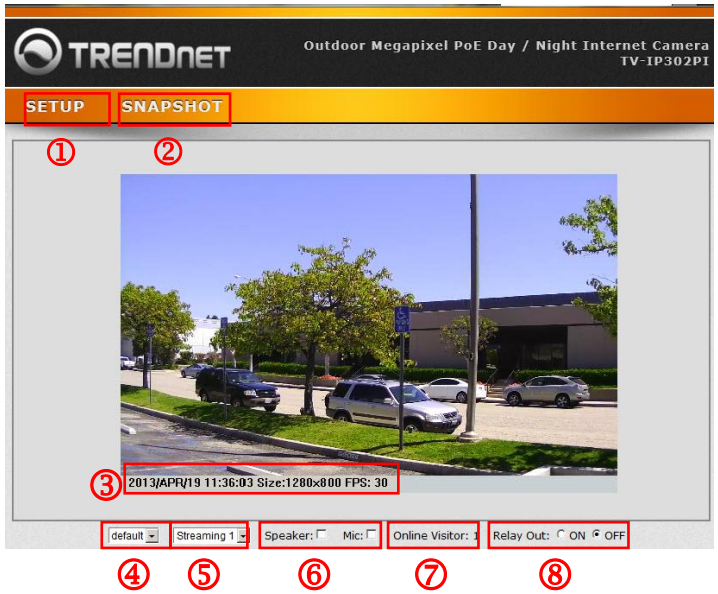
After you login into the live screen of the camera, the main page will appear as below:



The live screen of the IP camera configuration provides you with many useful information and functions, including:

① **SETUP** : Click the button to configure the camera.

② **SNAPSHOT:** Click the button to take a snapshot. The snapshot will pop up another window for your review first. Click disk icon to save the snapshot at the desire destination.

③ **System Information**: It shows current system Date, Time, Video Resolution, and Video Refreshing Rate.

④ **Digital Zoom**: The drop down menu has 3 images size available, 1/2x, 1x and 2x. The default is 1/2x.

⑤ **Streaming Profile**: Use the drop down menu to select Streaming 1 & Streaming 2 video. (If the streaming 2 setting is closed on "AUDIO/VIDEO SETTING >> Video", this option will not appear)

⑥ **Speaker/Microphone**: Click the "Mic" to speak out through the camera. Click the "Speaker" to receive the on-side sound and voice from the camera.

⑦ **Online Visitor**: It shows how many people connect to this IP camera.

⑧ **Relay On**: Click the Relay out "ON" to trigger the relay output for testing. click "Off" to stop triggering. To switch between these two types of relay out, please refer to page 32 of the **GPIO Setting** session.

One the live view video, right click the mouse for the additional menu options.

- **Snapshot**: Save a JPEG picture
- **Record Start**: Record the video in the local PC. It will ask you where to save the video. To stop recording, right-click the mouse again. Select "Record Stop". The video format is AVI. Use Microsoft Media Player to play the recorded file.
- **Mute**: Turn off the audio. Click again to turn on it.

  The "mute" button does not affect the playback recording video. As long as the "2-Way Audio" option in the audio setting is enabled, all the audio will be recorded into the playback video even you click "mute" in the live page.
- **Full Screen**: Full-screen mode.

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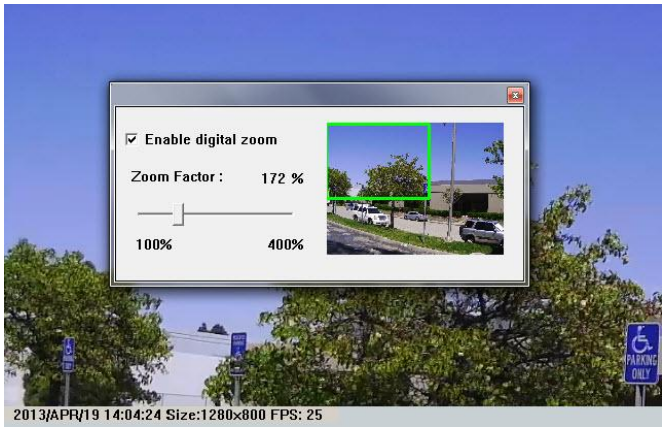
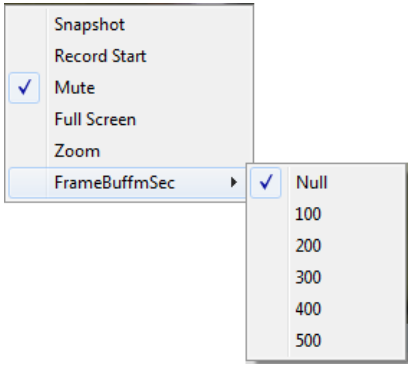
- **Zoom**: Enable zoom-in and zoom-out functions. Select "Enable digital zoom" option first within the pop-up dialogue box and then drag and drop the bar to adjust the zoom factors.



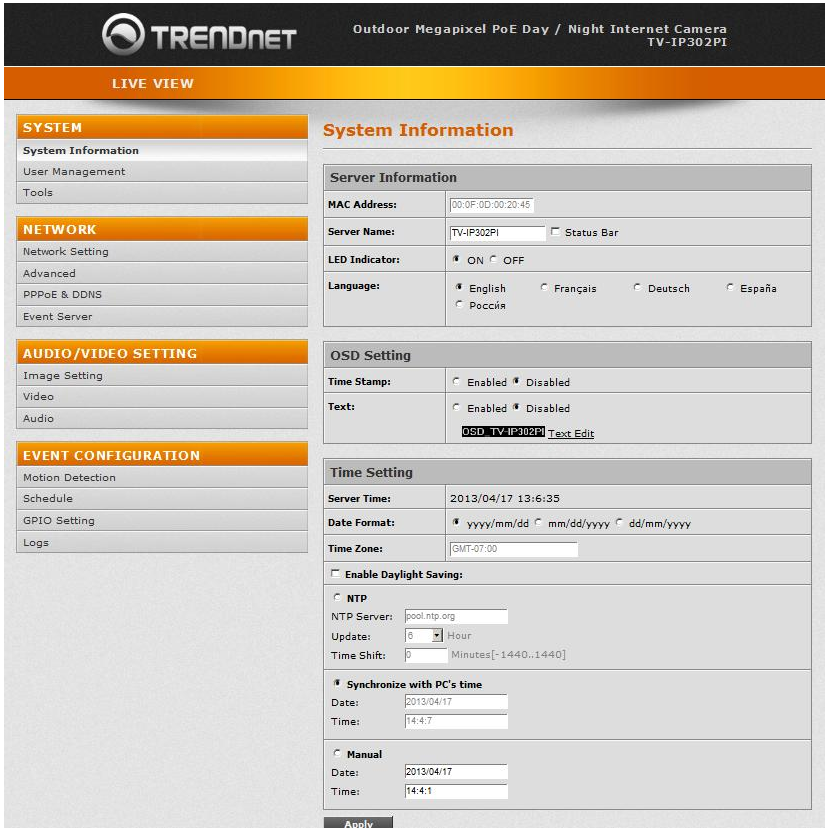
- **Frame Buffer mSec**: This function is to build a temporary buffer to accumulate several video frames. This function can make video smooth-going when the Network speed is slow and lag. If you select "100", then it plays video after 100 mSec when starting receiving images from camera. The slower of the Network is, the bigger value should be selected. The default value is null.



Configuring the Camera Setting

To configure the camera, click **SETUP** on the live screen.

The Web Configuration contains the settings that are required for the camera in the left menu bar, including System Setting, Network Setting, Audio/Video Setting, and Event Setting.



To return to the live screen, please click the **LIVE VIEW** button.

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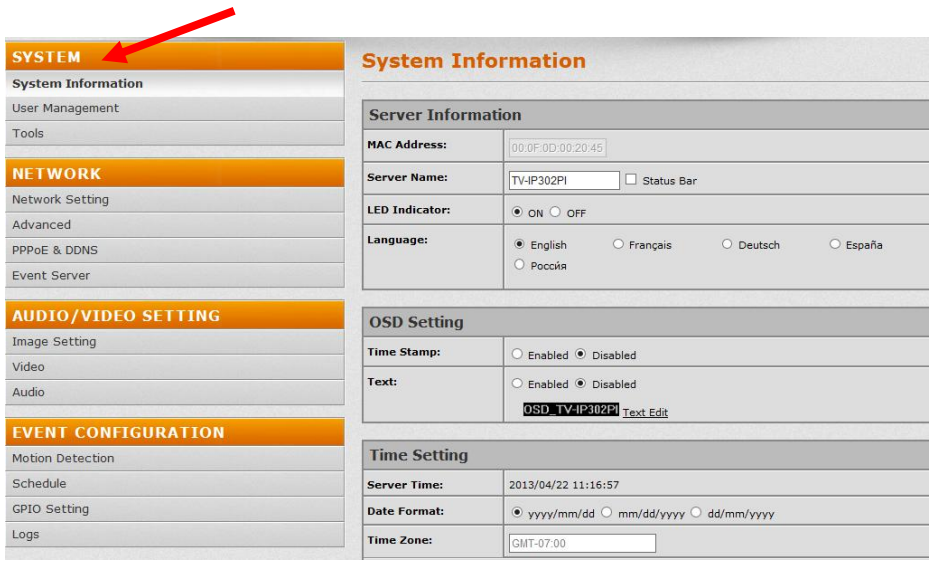
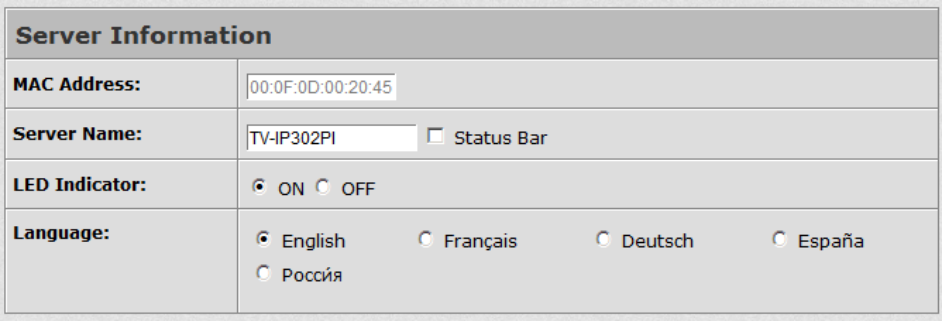
System

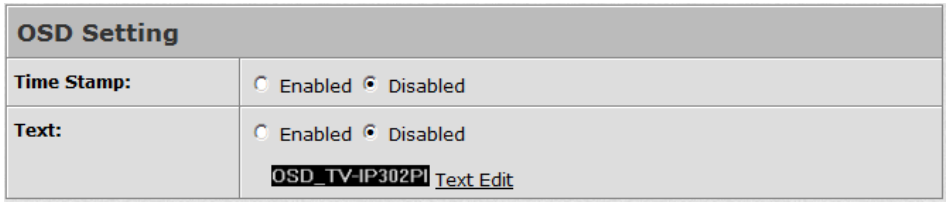


System >> System Information >> Server Information


Server Information
MAC Address: 00:0F:0D:00:20:45
Server Name: TV-IP302PI Status Bar
LED Indicator: ON OFF
Language: English Français Deutsch España Россия

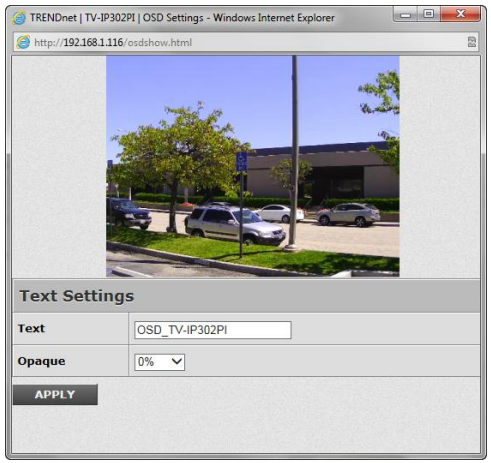
- **MAC Address**: It indicates the IP Camera's MAC address.
- **Server Name**: The Camera name.
- **LED Indicator**: Turn the LED light on or off by click the ON/OFF button.
- **Language**: There are 5 languages options. When changing the language, it will prompt dialogue box for confirmation. Click "Yes" to proceed.

System >> System Information >> OSD Setting



- **Time Stamp**: Enable or disable the time that will show on the live screen.
  - **Position**: After enabling time stamp, you can select the position of time stamp on the live screen.

- **Text**: Enable the Text option to have the desire text show on the camera live screen.
  - **Text Edit**: Click it to call out "text edit" window:
    - **Text**: Key in the words you want to show on the live screen.
    - **Opaque**: Set the background transparency of the text.



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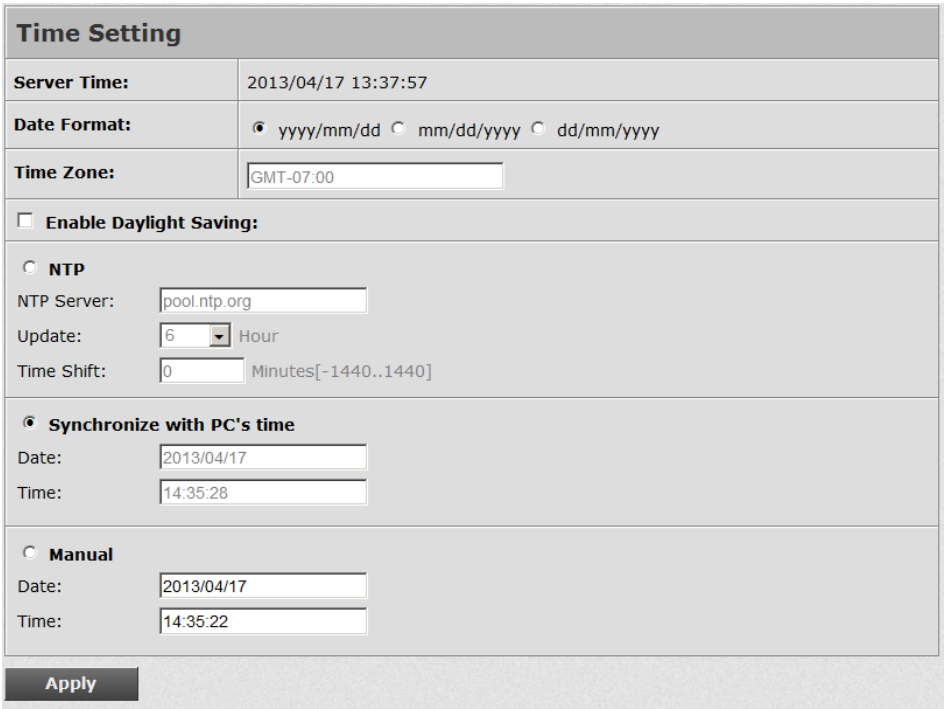
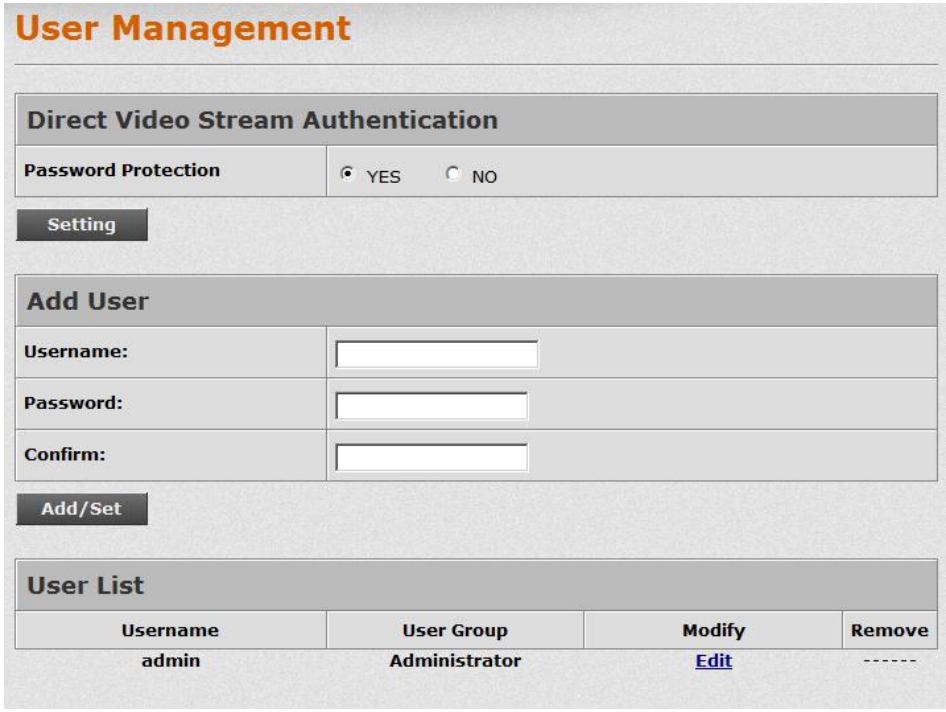
System >> System Information >> Time Setting



- **Server Time:** It shows current IP camera server time.
- **Date Format**: Select the date display format.
- **Time Zone**: Select your time zone. It affect server time when you use "NTP" time.
- **Enable Daylight Saving**: select the start and end daylight saving time.
- **NTP**: Type in the IP address of the NTP server and interval time. The time of the IP camera will be synchronized with NTP server time. To use this option, if the NTP Server is under WAN, the IP camera must be set to access WAN (Using the WAN IP that provide by your ISP provider, or setup by **UPnP Port Forwarding** (page 18)
- **Synchronize with PC's time**: In "Date" and "Time" column it shows your current PC time. Click "Apply" to make the IP camera time the same with PC time. Note that IP camera will not check with PC at every moment automatically. Every time when you want to synchronize the IP camera time with PC time again, please select this option and click "Apply".
- **Manual:** Type in the date and time, and click "Apply".

System >> User Management



- **Direct Video Stream Authentication:**

  To steam the video directly without going through the configuration page, you can access it via Internet.

  Stream 1 Video: http://camera_ip_address:port/stream1view.htm

  Stream 1 Video: http://camera_ip_address:port/stream2 view.htm

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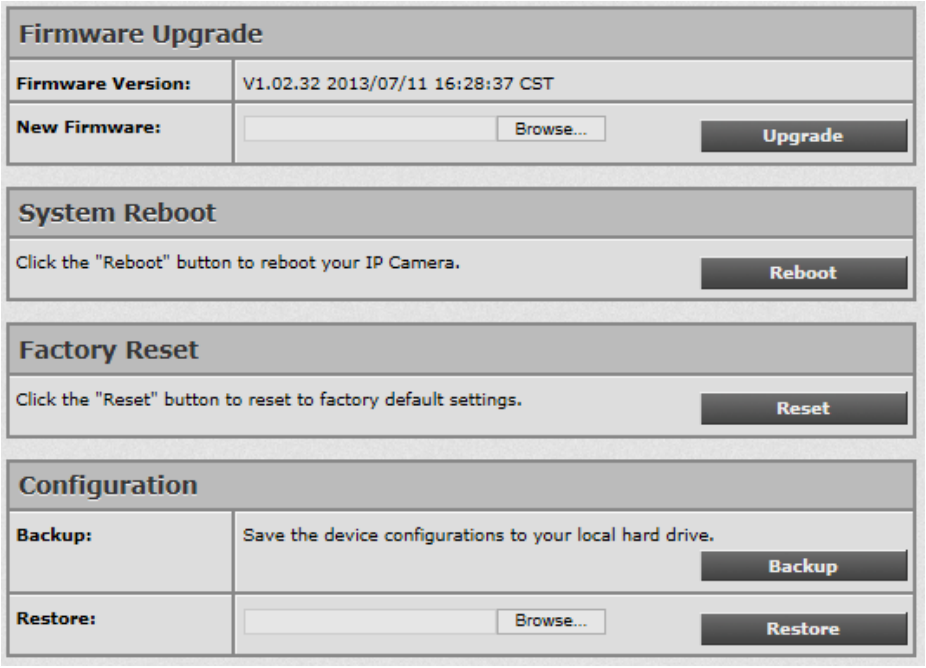
- **Enable Password Protection**:
  - **Yes:** User needs to enter user name and password to stream the camera.
  - **No:** User can stream the camera without entering the username and password.
- **Add user**: Enter the username and password to add guest users to access the camera. The guest user can only view the live view video and is not allowed to do any configuration.
- **User List**: List all users that were added into the camera. Click "**Edit**" to modify the user information. Click "**Remove**" to remove the users from the list.
-

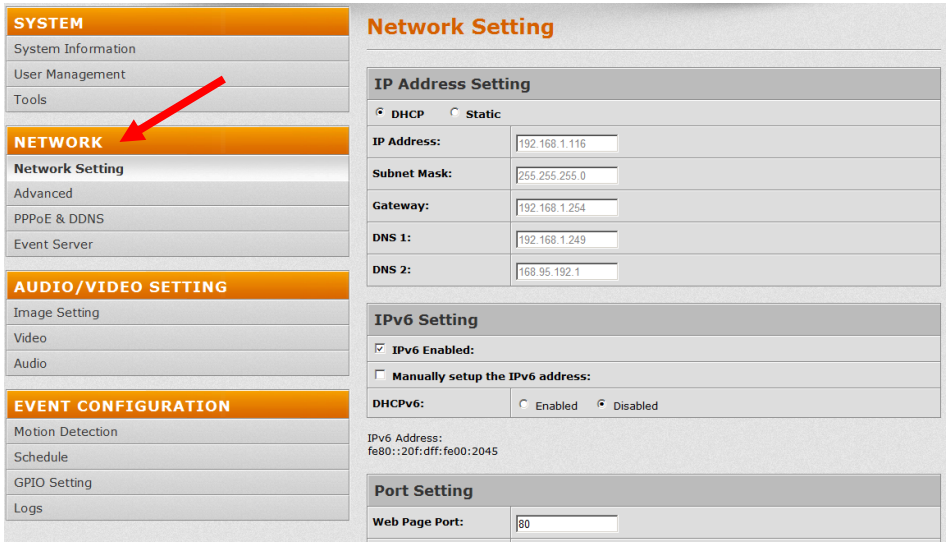
System >> Tools



- **Firmware Upgrade**:

  To update the firmware, click "**Browse**" to select the firmware, then click "**Upgrade**" to proceed. Please do not disconnect power or Network cable during firmware upgrading.
- **System Reboot**: Click **Reboot** to reboot the IP camera.
- **Factory Reset**: Click **Reset** to reset all the settings back to factory default value
- **Configuration**:
  - **Backup**: Click **Backup** to save the configuration to your computer.
  - **Restore**: Click "**Browse...**" to select the configure file from your computer then click **Restore** to restore all setting

NETWORK



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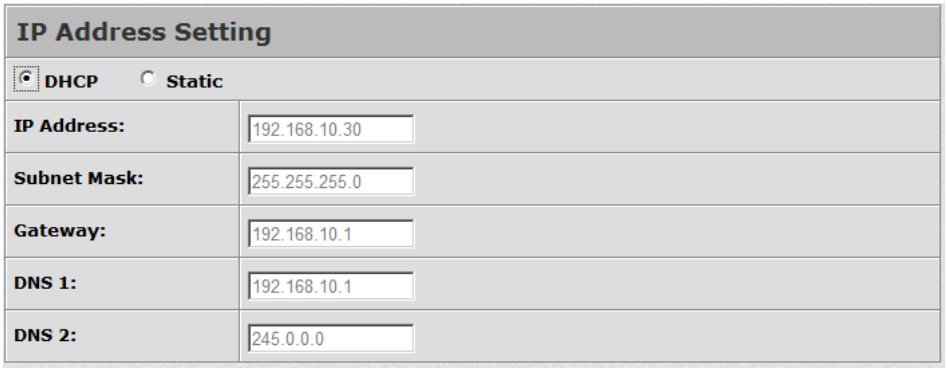
Network >> Network Setting >> IP Address Setting



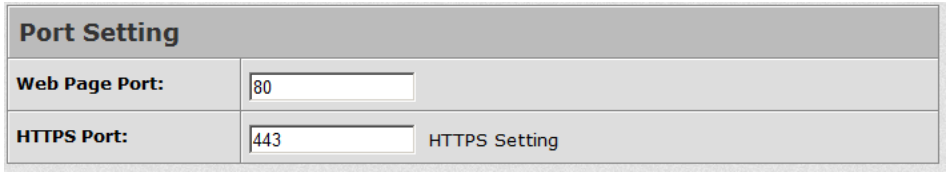
- **DHCP**: Select this option when your network uses the DHCP server. When the camera starts up, it will be assigned an IP address from the DHCP server automatically.
- **Static IP**: Select this option to type in IP address, subnet mask, gateway, and DNS manually. Default IP address is 192.168.10.30 if the camera doesn't connect with DHCP server. DNS (Domain Name System) translates domain names into IP addresses. Enter the Primary DNS and Secondary DNS that are provided by the ISP.

Network >> Network Setting >> IPv6 Setting

IPv6 is a newer numbering system that provides a much larger address pool than IPv4, which accounts for most of today's Internet traffic. You can manually enter IPv6 address , enable DHCPv6 to get IPv6 address automatically.

- **Manually setup the IPv6 address**: You can set up IPv6 manually by enter IP Address, Gateway, and DNS.
- **DHCPv6**: If you have a DHCPv6 server, enable this option to assign the IPv6 from server. The assigned IP address will be displayed
- **IPv6 Address**: A virtual IPv6 address generated by the IP camera. This virtual IPv6 address cannot use on WAN. To access the IP camera via IPv6 address, open a web browser and type in http:// [IPv6 Address] in the address bar. The [ ] parentheses mark is necessary for IPv6 address.

Network >> Network Setting >> Port Setting



- **Web Page Port**: Setup HTTP web page connecting port which is also video transmitting port (Default: 80)
- **HTTPS Port**: Setup HTTPS connecting port (Default:443)

Network >> Network Setting >> Web Authentication

The camera supports two levels of authentication, Basic and Digest. The Basic option having the username and password transmitted as plain text. The digest option encrypted username and password during data transmission. The default authentication is set to Digest.

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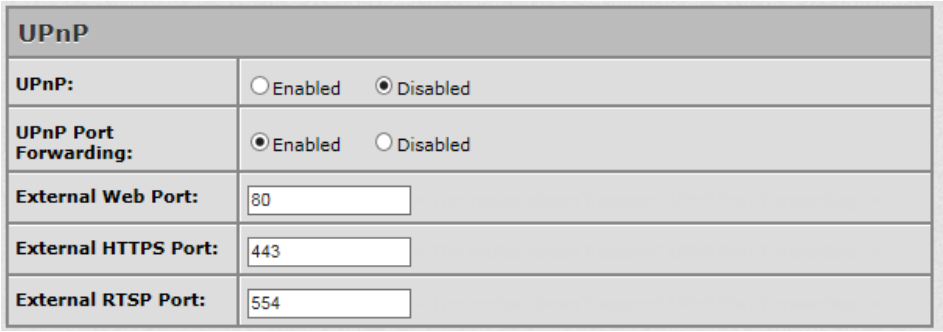
Network >> Network Setting >> UPnP



- **UPnP:**

  This IP camera supports UPnP (Universal Plug and Play) which is a set of computer network protocols that enable the device to device interoperability

- **UPnP Port Forwarding:**

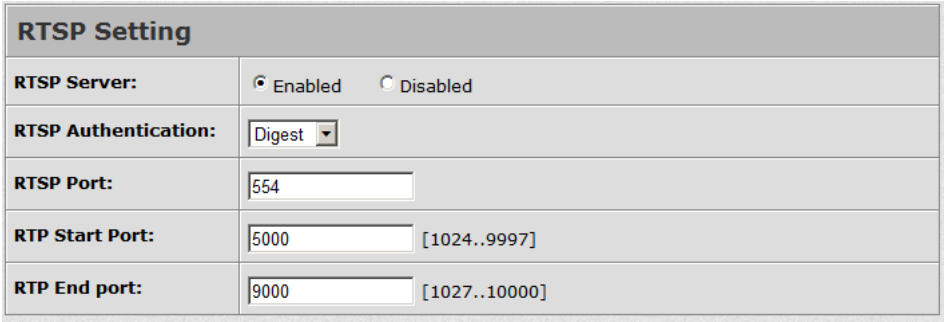
  When the camera is installed under a router, enable **UPnP Port Forwarding** to let the router open ports so that the video streams can be sent out from a LAN. Set Web Port, Http Port, and RTSP port, and make sure your router supports UPnP and the function has been activated.

  After type in the port number and click "Apply", the port forwarding status will display beside the port column. There are three status will show.

  - Registered successfully: UPnP port forwarding setting succeeds.
  - The router doesn't support UPnP Port Forwarding: The camera can detect the router, but router return a message that it does not support UPnP Port Forwarding.
  - The router is with some problems. Please reboot it: The camera cannot detect the router. Please check your router.

  If this router has a WAN IP, this function allows the camera to do WAN access. In the address bar of browser, key in: "https:// (router WAN IP) : (external web port) /" to access the IP camera.

Network >> Network Setting >> RTSP Setting



- **RTSP Server**:

  Enable it, then you can access camera and get image via RTSP protocol.

  If you have a media player that supports RTSP protocol, you can use it to receive the video streaming from IP camera. The RTSP address can be set for two streamings respectively.

- **RTSP Authentication**:

  "Disable" means everyone who knows your camera IP Address can link to your camera via RTSP. No username and password are required.

  Under "Basic" and "Digest" authentication mode, the camera asks the user to give username and password before allows accessing. The password is transmitted as plain text under basic mode, which provides a lower level of security than under digest mode. Make sure your media player supports the authentication schemes.

- **RTSP Port**: It's used for TCP connection. Setup port for RTSP transmitting (Default: 554)

- **RTSP Start and End Port**: It's used for UDP connection. Setup port for RTSP transmitting (Default: 5000, 9000)

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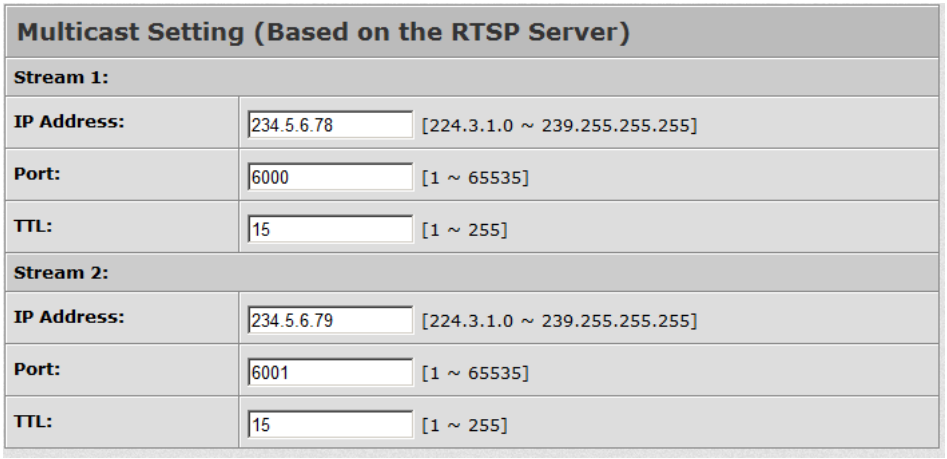
Network >> Network Setting >> Multicast Setting (Based on the RTSP Server)



Multicast is a bandwidth conservation technology. This function allows several users to share the same packet sent from IP camera. To use Multicast, appoint IP Address and port here. TTL means the life time of packet, The larger the value is, the more user can receive the packet.

To use Multicast, be sure to enable the function "Force Multicast RTP via RTSP" in your media player. Then key in the RTSP path of your camera: "rtsp://(IP address)/" to receive the multicast.

Network >> Network Setting >> ONVIF

Under ONVIF connection, the video will be transmitted by RTSP. Be sure to enable the RTSP server in IP setting, or you're not able to receive the video via ONVIF.

- **ONVIF**:

  Choose your ONVIF version. The two devices that use ONVIF to communicate should be set to the same version.

- **Security**:

  Select "Disable", then the username and password are not required when accessing the camera via ONVIF. Select "Enable", then username and password are necessary.

- **RTSP Keepalive**:

  When the function is enabled, the camera checks once in a while if the user who links to the camera via ONVIF still keeps connecting. If the connection had been broken, the camera stops transmitting video to user.

Network >> Network Setting >> Bonjour

This function enable Safari browser's bookmark to link to this IP camera. The Bonjour name is the name that display in the bookmark. Please note the Bonjour function on Safari browser does not support https protocol. If you selected "https" mode, you will see the camera appears on Safari's bookmarks but will not be able to access the camera.

Network >> Network Setting >> LLTD

If your PC supports LLTD, enable this function then you can check the connection status, properties, and device position(like IP address) of this IP Camera in the network map. In Windows Vista or Windows 7, you can find LLTD through the path:

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Call out the Control Panel → Network and Internet → Network and Sharing Center → Click "See full map".

Network >> Advanced >> HTTPS

When the users access cameras via Https protocol, the transmitted information will be encrypted so that the security level is arisen.

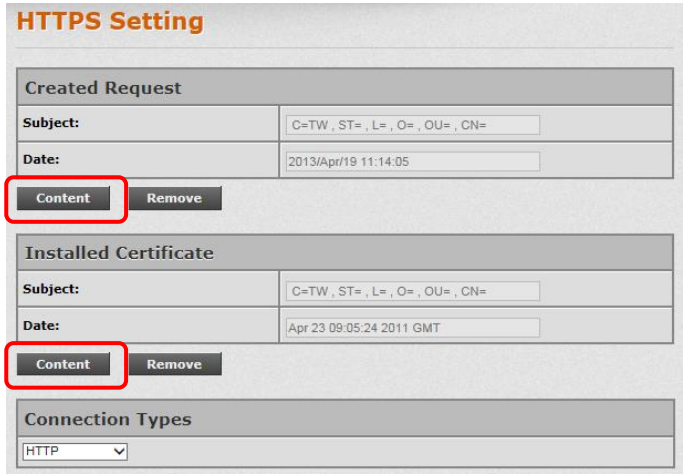
You can select the connection type.

- **Http**: user can access the camera via Http path.
- **Https**: user can access the camera via Https path but cannot via Http path.
- **Http & Https**: Both the Http and Https path can be used to access the camera. When you change the setting of connection type, it may cause connection error or disconnection error if you switch the protocol directly. Therefore, Http & Https mode is necessary. If you want to change from Http to Https, please switch to "Http & Https" mode first, and then switch to "Https" mode. Same method when you change from Https to Http.

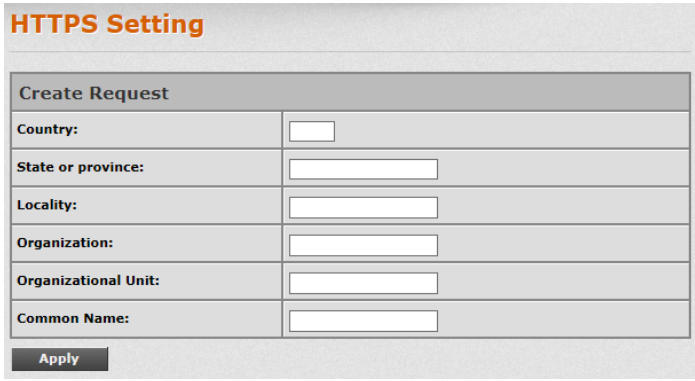
The Https protocol has certificate verifying mechanism. When the user access a website via Https, the browser will check the certificate of that domain and verify its trustiness and secure.

Certificate generation process:

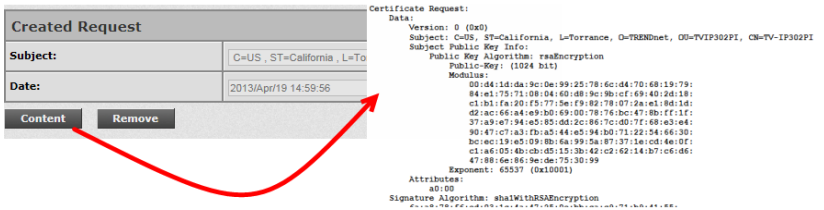
1. **Remove the existing certificate**: Before you generate a new certificate, please remove installed one. Select "Http" connection type and click "Remove". If a dialog box pops up to ask you to confirm, click "Yes".



2. **Created Request**: Fill in the following form and click "apply".



3. After you generate a certificate request, if you choose to turn it to the trusted third-party to verify, please click "Content" and copy all the request content.



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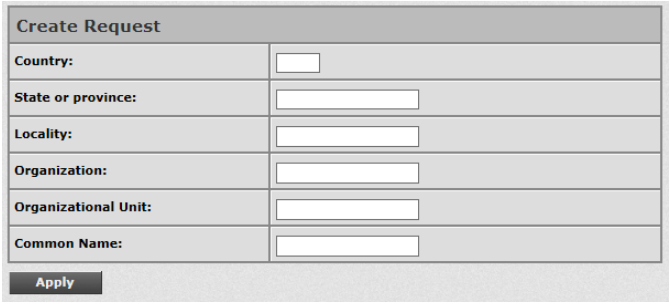
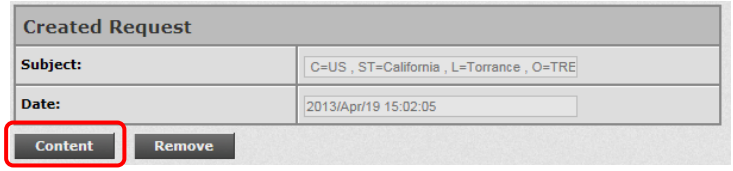
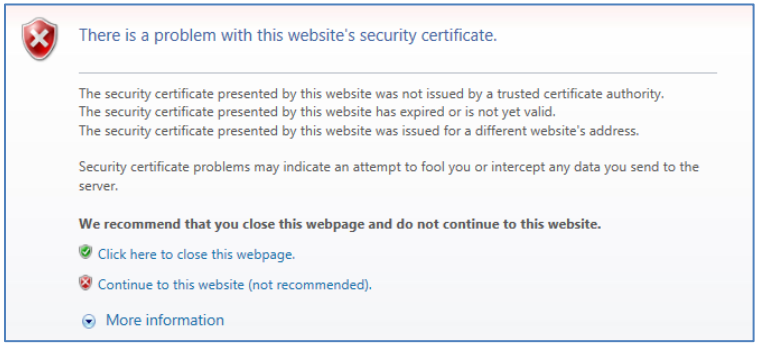
4. According to the certificate source, there are two ways to install the certificate.
   - If you had sent the certificate request to do sign and received a signed certificate, please click" browse" and find the certificate file in your computer. Click "Apply" to install it.
   - If you choose to generate a self-signed certificate, fill in the following forms and set validity day, click "Apply" to finish installed it.



After finishing installation, you can click "Content" to call out and check the certificate content.



5. To use Https to access camera, open your browser, and key in "https://(IP address)/" in the address bar. Now your data will be transmitted via encrypted communications, and the browser will check your certificate status. If it shows you a warning message. The warning message meant that the certificate is self-signed or signed by distrusted institution. Click **Continue to this website** to view the view the camera.

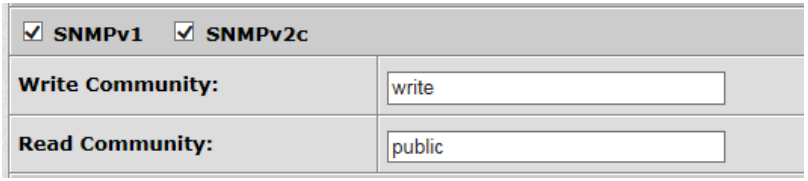

There is a problem with this website's security certificate.
The security certificate presented by this website was not issued by a trusted certificate authority.
The security certificate presented by this website has expired or is not yet valid.
The security certificate presented by this website was issued for a different website's address.
Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.
We recommend that you close this webpage and do not continue to this website.
Click here to close this webpage.
Continue to this website (not recommended).
More information

Network >> Advanced >> SNMP

SNMP (Simple Network Management Protocol) provides a simple framework for administering networked hardware. To manage the IP camera, you have to prepare a MIB browser or similar tools first. SNMPv1, SNMPv2c, and SNMPv3 can be enabled simultaneously.

The following examples are based on MG- SOFT MIB Browser. Depending on your MIS Browser, you may see different interface and options. Please refer to the user manual of your MIB Browser.

- SNMPv1 and SNMPv2:



The term "Community name" in SNMPv1 and SNMPv2c can be roughly regarded as key. The person who has the community name has the authority to read or edit the information of IP camera via SNMP.

Click the box to enable SNMPv1 or SNMPv2c protocol, and specify the community name for write (read and write) and read (read-only). The user who use read community name to access the IP camera cannot modify any data of the camera. The community name can be any English characters and numbers, and must be shorter than 31 bits.

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- SNMPv3:

SNMPv3	
Write Security Name:	write
Authentication Type:	MD5 SHA
Authentication Password:	
Encryption Type:	DES AES
Encryption Password:	
Read Security Name:	public
Authentication Type:	MD5 SHA
Authentication Password:	
Encryption Type:	DES AES
Encryption Password:	

For data security reason, the authentication and encryption assurances are added when developing SNMPv3. The user has to give not only the security name(similar with "community name" in v1&v2c) but the password in order to access the IP camera. Please set security name, authentication type, authentication password, encryption type, encryption password of write and read respectively. The security name can be any English characters and numbers, and must be shorter than 31 characters. The password must between 8 to 64 characters.

Different from in SNMPv1 and v2c, the user have to create an account when using SNMPv3. In the account parameters, key in the security name and password you set in the camera to get accessing.

.

- SNMPv1/SNMPv2 Trap:

SNMPv1/v2c Trap	
Trap Address:	
Trap Community:	public
Trap Event:	Cold Start Setting Changed Network Disconnected V3 Authentication Failed

Trap is a mechanism that allows a managed device to send messages to manager instead of waiting passively for polling from the manager. Specify the trap event. When those events happen, the camera will send the ring message to the Trap Address, which is usually the manager's IP address. Trap Community means the community that can receive the trap message.

Note: Trap Address must be under the same LAN with IP camera.

- **Cold Start**: The camera starts up or reboots.
- **Setting changed**: The SNMP setting is changed.
- **Network Disconnected**: The network connection was broken down. (The camera will send trap messages after the network being connected again)
- **V3 Authentication Failed**: A SNMPv3 user account tries to get authentication but failed. (Due to incorrect password or community)

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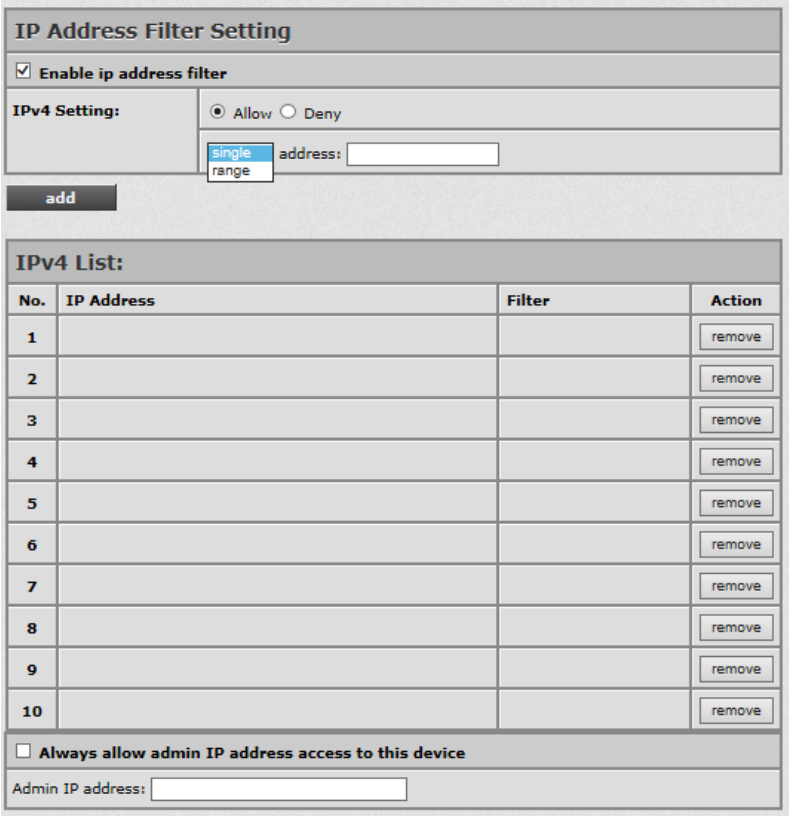
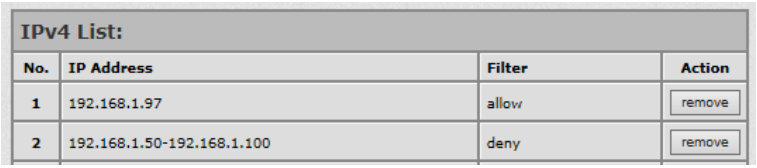
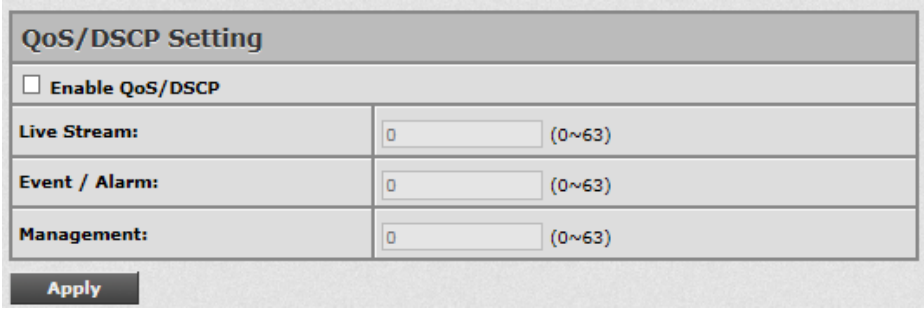
Network >> Advanced >> IP Address Filter



You can allow or deny an IP address or even a range of the IP address to access the IP camera. If you would like to deny a range of IP address but would allow an IP within that range can access the camera, please setup the allow IP address in the 1st priority and set the deny range of IP address as 2nd priority as example below.



Network >> Advanced >> QoS/DSCP



DSCP specifies a simple mechanism for classifying and managing network traffic and provide QoS on IP networks. DSCP is a 6-bit in the IP header for packet classification purpose.

The number 0~63 for Live Stream, Event / Alarm, and Management represent the ratio that the bandwidth is divided. For example, if you set 5, 10, and 20 for these three items, then the bandwidth of these items is 5:10:20. The item getting more bandwidth has lower probability to be delayed. There is no difference between setting "0, 0, 0" or "63, 63, 63" because under these two setting the three items will get equal bandwidth (1/3).

The three stream control the protocols respectively:

- **Live Stream** (Video and audio) : RTP / RTSP
- **Event/Alarm** : FTP / SMTP / SAMBA / SIP
- **Management** : HTTPS / HTTP / SNMP

Note: The "Management" stream handles both the live view and the setting area of the web page on which the data is transferred via http/https protocol. If you prefer to distribute more bandwidth when using the web browser to watch the live video, please adjust the Management Stream instead of Live Stream.

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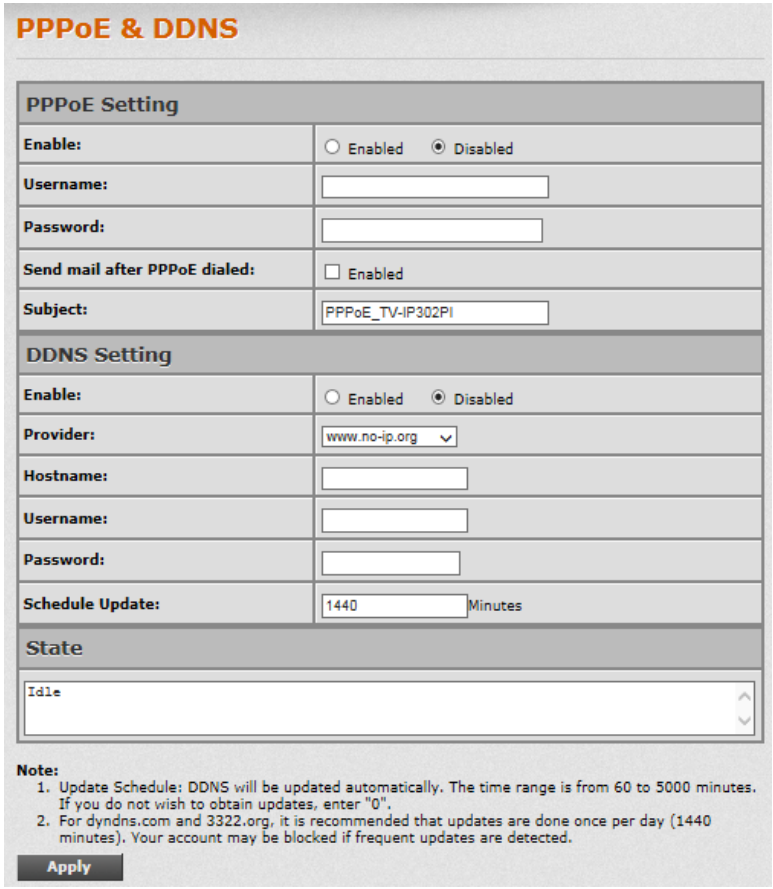
Network >> Advanced >> IEEE 802.1x

IEEE 802.1x is an IEEE standard for port-based Network Access Control. It provides an authentication mechanism to device wishing to attach to a LAN or WLAN. To use this function, you need a device to build IEEE 802.1x LAN at first.

The EAPOL protocol support service identification and optional point to point encryption over the local LAN segment.

Please check what version of the authenticator and authentication server support. This camera supports EAP-TLS method. Please enter ID, password issued by the CA, then upload related certificates.

Network >> PPPoE & DDNS



- **PPPoE**

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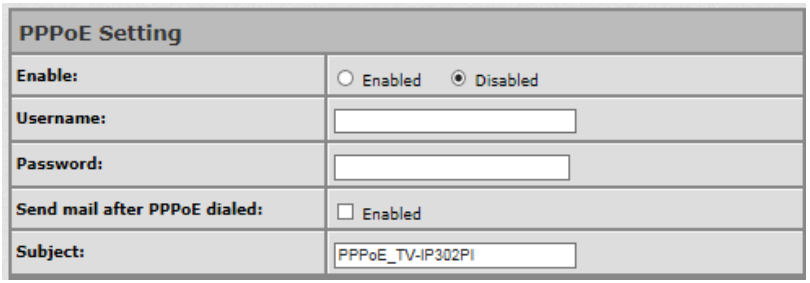
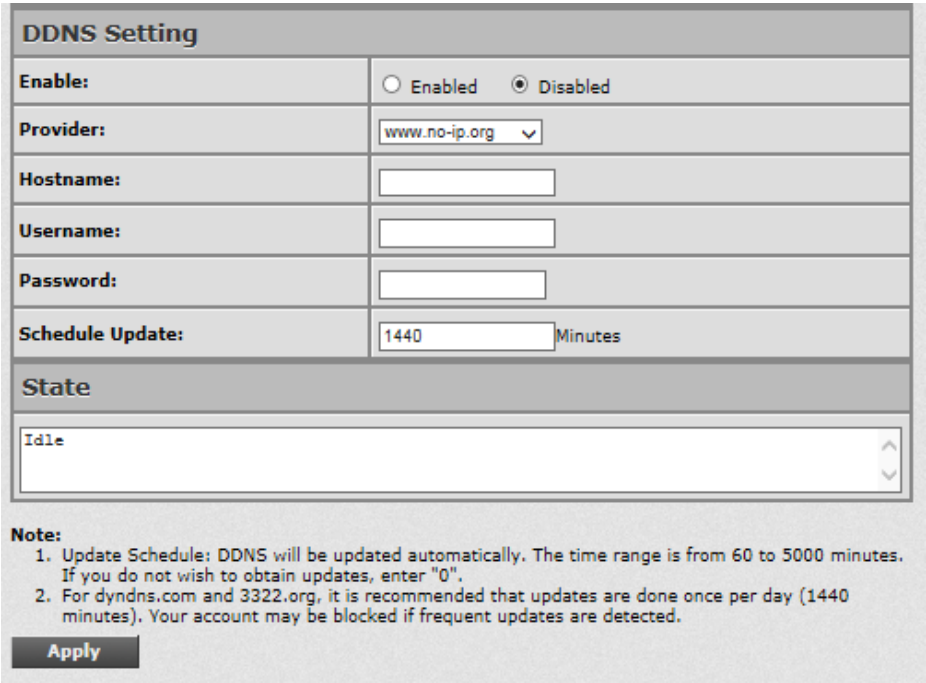


Select "Enabled" to use PPPoE. Type in the username and password for the ADSL connection.

Send mail after dialed: When successfully connecting to the internet, it sends a mail to a specific mail account. As for the mail account setting, please refer to Server setting page.

- **DDNS**


DDNS Setting
Enable:
Enabled
Disabled
Provider:
www.no-ip.org
Hostname:
Username:
Password:
Schedule Update:
1440
Minutes
State
Idle
Note:
1. Update Schedule: DDNS will be updated automatically. The time range is from 60 to 5000 minutes. If you do not wish to obtain updates, enter "0".
2. For dyndns.com and 3322.org, it is recommended that updates are done once per day (1440 minutes). Your account may be blocked if frequent updates are detected.
Apply

This camera supports following Dynamic DNS server: Dyndns.com, 3322.org, no-ip.com and IPTECNO DDNS.

Enable DDNS, and select a DDNS provider. Some providers will ask you to register and get an account before you use their service. Fill in the user name, hostname, and password (if need). If setting up IP schedule update too frequently, the IP may be blocked. In general, we suggest set schedule update to once a day (1440 minutes). After click "Apply" the setting.

DDNS Status:

- Updating: Information update
- Idle: Stop service
- DDNS registration successful, can now log by http://<username>.no-cp.com: Register successfully.
- Update Failed, the name is already registered: The user name has already been used. Please change it.
- Update Failed, please check your internet connection: Network connection failed.
- Update Failed, please check the account information you provided: The server, user name, and password may be wrong.

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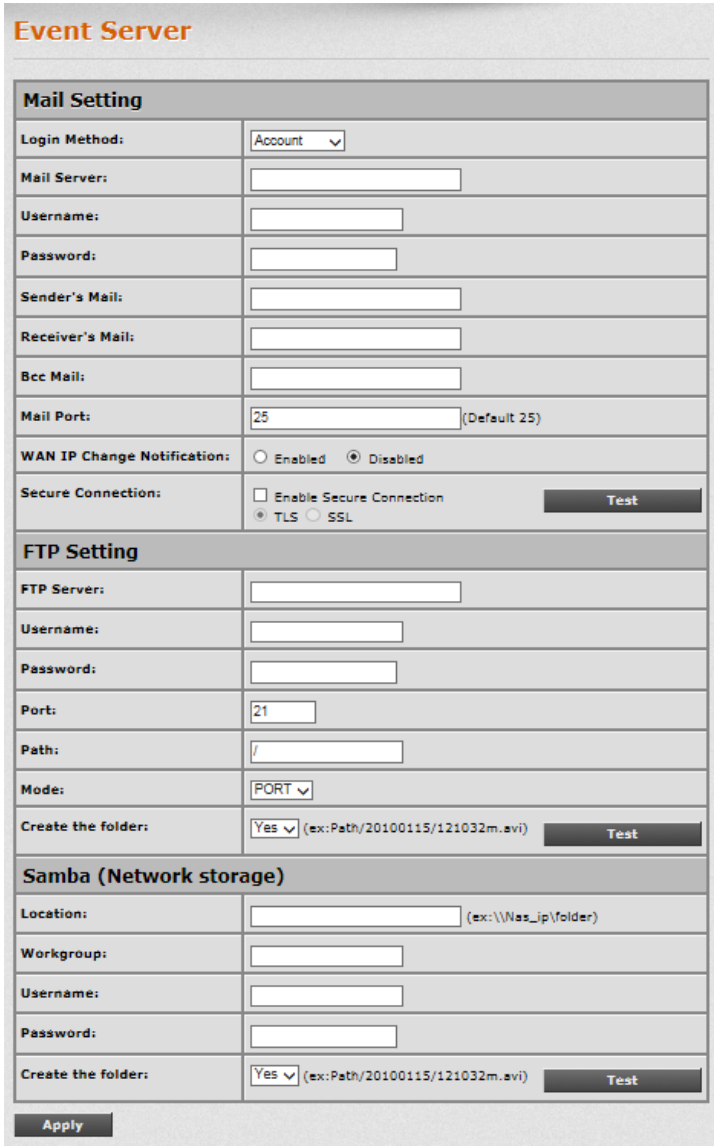
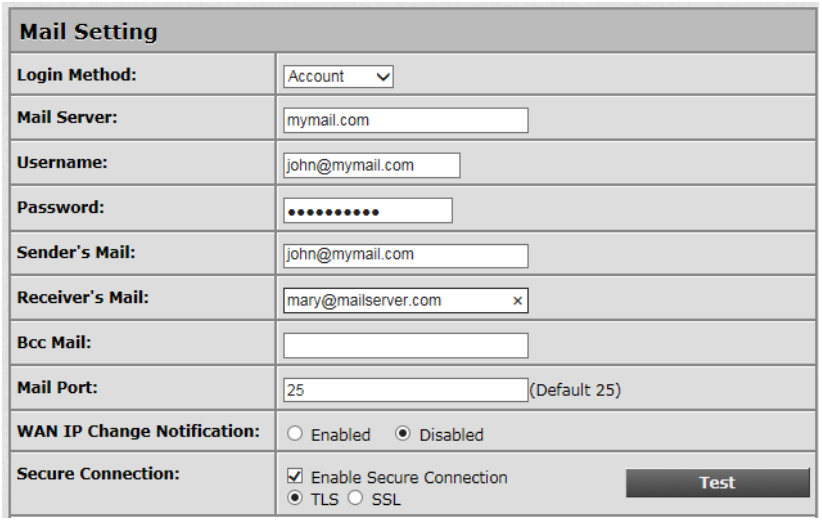
Network >> Event Server



The settings of Email, FTP and SAMBA are used when the event happens, schedule snapshot executes, or the alarm input is triggered. Select the item to display the detailed configuration options. You can configure either one or all of them.

- **Mail Setting**



- **Login Method**: Select "Anonymous" to disable the authentication feature, or select "Account" and then enter the Username and Password according to the mail server configuration.
- **Mail Server**: Enter the mail server address. For example, myserver.com. If you are using a free mail service (e.g. Google gmail.com®, Yahoo®, Hotmail®), please enter the SMTP server address from the service provider.
- **Username & Password**: Enter the sender's username and password to login the mail server. For free mail server, please the email address as the username.
- **Sender's Mail**: Enter the email address of the user who will send the email.
- **Receiver's Mail**: Enter the mail address of the user who will receive the email. Use semicolon to separate each address. It can contain up to 64 characters in the column.
- **Bcc Mail**: Enter the mail address of the blind carbon copy receiver.

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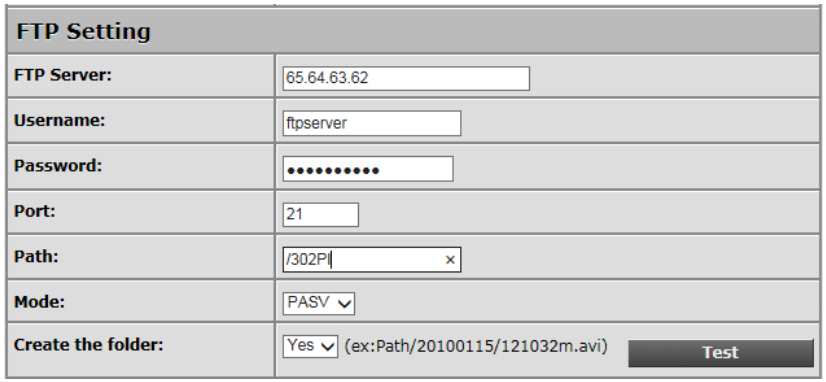
- **Mail Port**: Assign the SMTP port in the text box. The default SMPT port is 25. For the free mail service, please enter the correct port number from the service provider.
- **Wan IP Change Notification**: Enable this option, then a mail will be sent if the Wan IP of router above the camera is changed.
- **Secure Connection**: If the mail server requires an encrypted connection, you should select the SSL option. TTLS is an extension to plain text communication protocols. It offers a way to upgrade a plain text connection to an encrypted (TLS or SSL) connection.

Click **Apply** to save the setting, then use **Test** button to test the server connection. A message box will tell you "OK!" if it works, and a test e-mail will be sent to receiver's mail address.

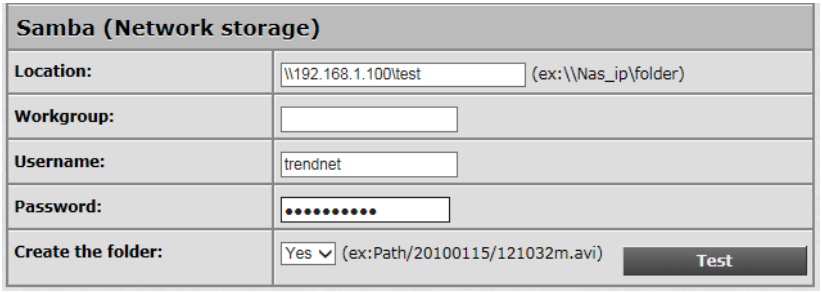
- **FTP Setting:**



- **FTP Server**: Enter the IP address of the target FTP server.
- **Username & Password:** Enter the username and password to login into the FTP server.
- **Port**: Enter the port number used for the FTP server.
- **Path**: Enter the destination folder for uploading the images. For example, /302PI.
- **Mode**: In **PORT** mode, the FTP server builds the connection to the user's data port actively. However, from the user-side firewall's standpoint, the action of connecting from FTP server is often considered to be dangerous and should be blocked. In **PASV** mode, the problem is solved: The FTP server waits for the data transmission connection built by the user. Make sure that the server supports the mode you select.
- **Create the folder**: Select Yes, then folders will be created folder by date under your FTP path.

Click **Apply** to save the setting, then click **Test** button to test the server connection. A message box will tell you "OK!" if it works, and a test file will be uploaded to FTP server.

- **Samba Setting:**



- **Location**: Enter the path of the shared folder.
- **Workgroup**: Type in the workgroup name of the computer.
- **Username** & **Password**: Enter the username and password to login into the Samba.
- **Create the folder**: Select **Yes**, then folders will be created by date under your Samba Server.

Click **Apply** to save the setting, then use **Test** button to test the server connection. A message box will tell you "OK!" if it works, and a test file will be created in the location.

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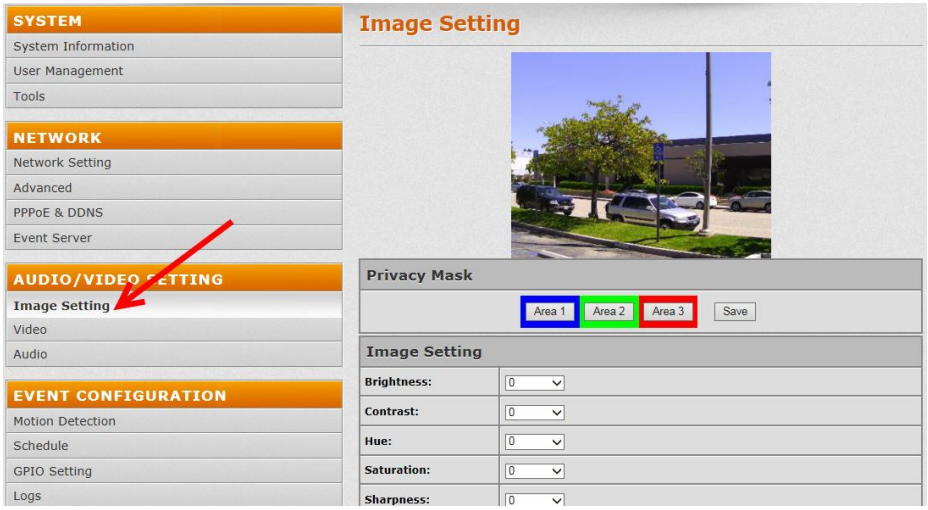
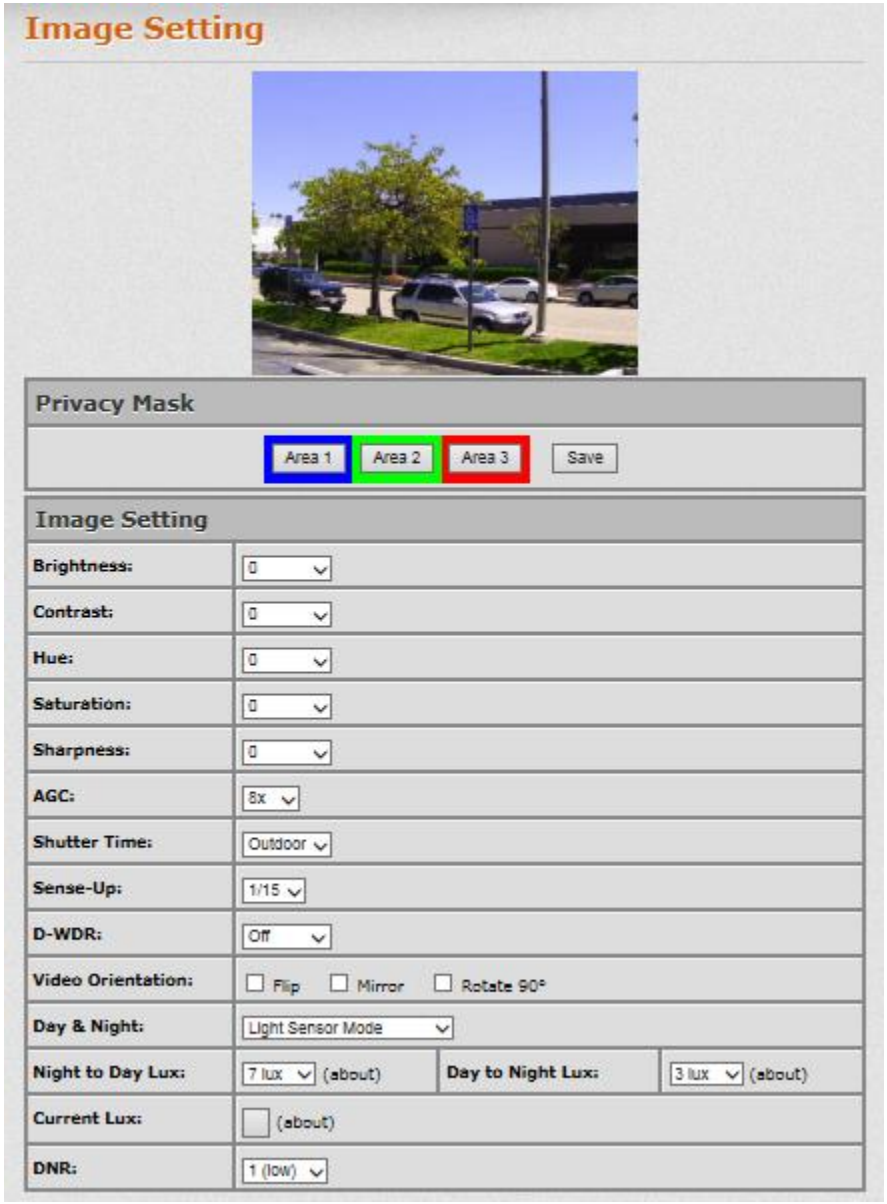
AUDIO/VIDEO SETTING



Audio/Video Setting >> Image Setting



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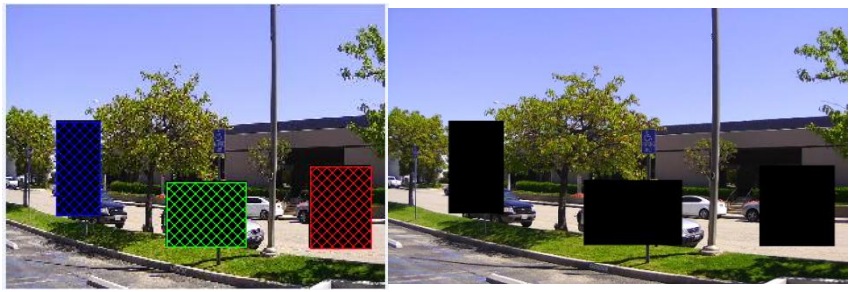
- **Privacy Mask**: For the security and privacy purpose, there are three areas can be setup for privacy mask. Click Area button first and drag an area on the above image, and remember to save your setting. The masked area will not show on both the live view and recording.



- **Brightness, Contrast, Hue, Saturation, Sharpness** can be adjusted here.
- **AGC**: Automatic gain control. The sensitivity of camera can adjusts with the environmental light. Enable this function and the brighter image can be got under dim light, but the level of noise may also increase.
- **Shutter Time**: Choose as the location of your camera or fixed shutter time. The shorter the shutter time is, the less light the camera receives and the image becomes darker.
- **Sense-Up**: This function increases the sensitivity of camera to get brighter image at night. The smaller the value you select, the slower the shutter speed becomes so that the image will get brighter, and moving subjects might be blurred.

  Sense-Up option is only enabled when users select "outdoor" or "indoor" in shutter time option.
- **D-WDR**: Digital Wide dynamic range. This function enables the camera to reduce the contrast in the view to avoid the dark zones resulting from over and under exposure.
- **Video Orientation**: Flip, mirror, or rotate the image.
- **Day & Night**: The camera can detect the light level of environment. If you choose "Light Sensor Mode", the image will be turned to black and white at night in order to keep clear. To set light sensor mode, appoint a lux standard of switching D/N here. Current lux value is provided for reference. Under "Times Mode" the switch time of Color / Black and white is according to the given time. If you select "Synchronize with DI input", the image turns to black and white when digital input is triggered. You can also control it by choosing "Color" or "B/W".
- **DNR**: Digital Noise Reduction. This function is able to filter the noise and blur from the image and show a clearer view.

Note: When you select a number in "Shutter Time", actually the shutter time varies in a range and controlled by camera automatically. Following table shows the shutter time option and corresponding range.

Option	Shutter Time Range (sec.)
Outdoor	1/10000 ~ Selected number in "Sense-up"
Indoor	NTSC: 1/125 ~ Selected number in "Sense-up" PAL: 1/100 ~ Selected number in "Sense-up"
1/30	1/10000 ~ 1/30
1/50	1/10000 ~ 1/50
1/60	1/10000 ~ 1/60
1/100	1/10000 ~ 1/100
1/125	1/10000 ~ 1/125
1/250	1/10000 ~ 1/250
1/500	1/10000 ~ 1/500
1/1000	1/10000 ~ 1/1000
* Sense-up options: 1/30, 1/15, 1/10, 1/5	

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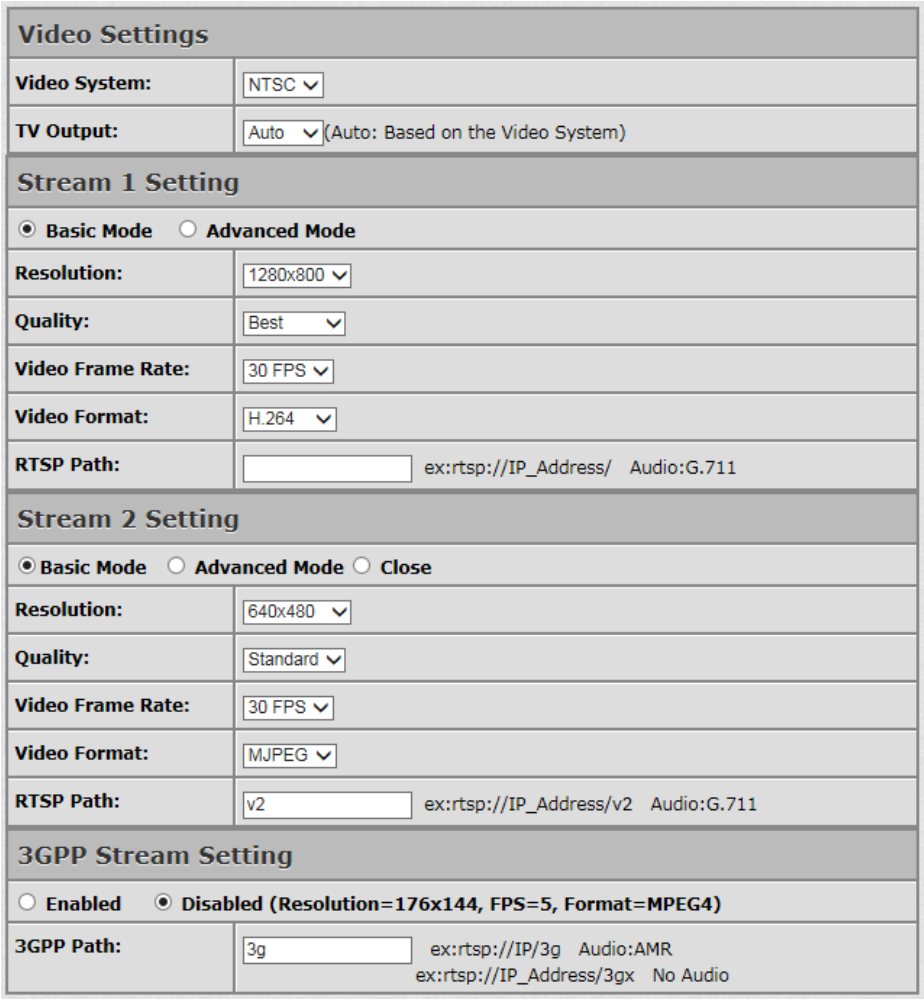
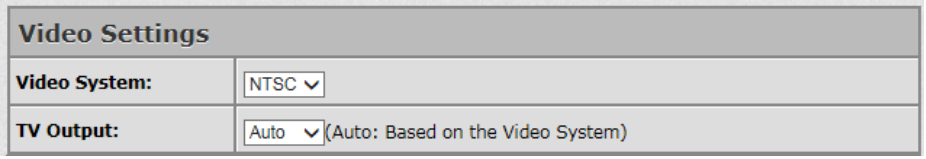
Audio/Video Setting >> Video Setting

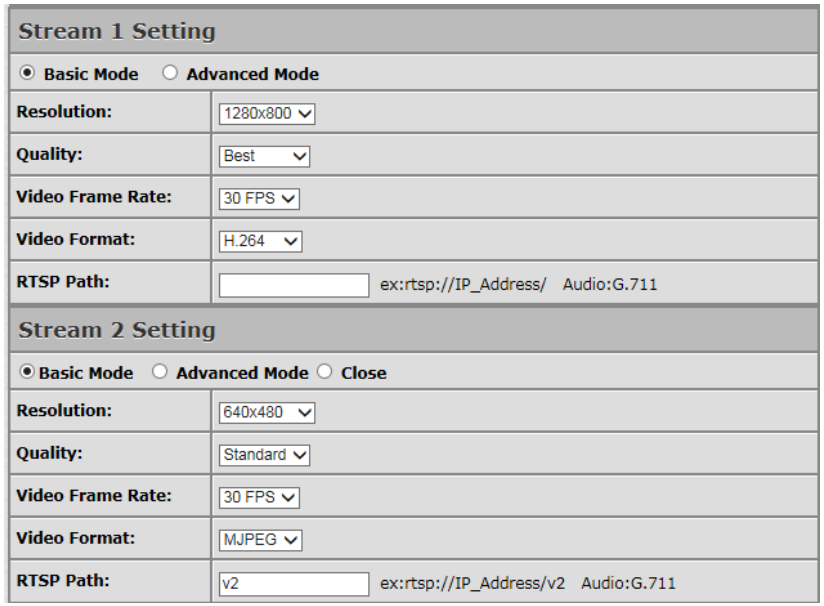


- Video Settings



Select the Video System (digital signal) and TV Output (analog signal).

- **Basic Mode of Streaming 1 and Streaming 2:**



- **Resolution**: 1280x800, 1280x720 , 640x480, 320x240, or 176x144
- **Quality**: The higher the quality is, the bigger the file size is. It might affect Internet transmitting speed if the file gets too large.
- **Video Frame Rate**: The video refreshing rate per second. The max value is affected by the input resolution you choose.
- **Video Format**: H.264, MPEG4, or M-JPEG.
- **RTSP Path**: Set the RTSP output connecting route. You can use the RTSP address displaying beside the column to access this IP camera.

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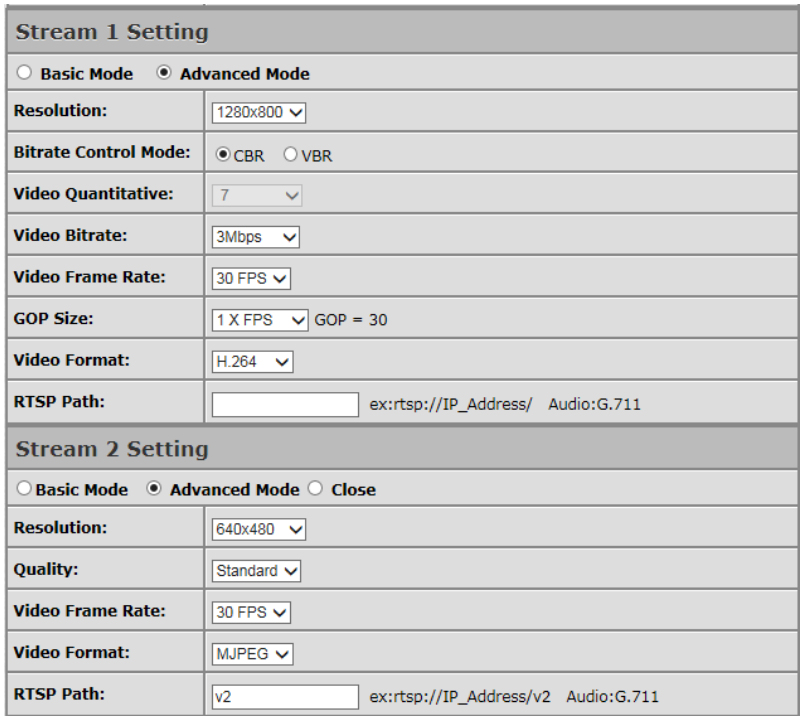
- **Advanced Mode of Streaming 1 and Streaming 2:**



- **Resolution**: 1280x800, 1280x720 , 640x480, 320x240, or 176x144
- **Bitrate Control Mode**: In CBR(Constant Bit Rate) mode, the bitrate keeps consistent all over the video. In VBR(Variable Bit Rate) mode, the bitrate changes with the complexity extent of the video data. VBR provides a better compression way and the file may be smaller. However, the VBR file size cannot be predicted. The image may become broken or lagged when your bandwidth is not enough for the data quantity you selected.
- **Video Quantitative**: The quality parameter of VBR. You can choose 1~10 compression rate. The higher the value is, the higher the image quality is.
- **Video Bitrate**: The quality parameter of CBR. You can choose 32kbps ~8Mbps. The higher the value is, the higher the image quality is.
- **Video Frame Rate**: The video refreshing rate per second. The max value is affected by the input resolution you choose.
- **GOP Size**: It means "Group of Pictures". The higher the GOP is, the better the quality is.
- **Video Format**: H.264, MPEG4, or M-JPEG
- **RTSP Path**: RTSP output connecting route. You can use the RTSP address displaying beside the column to access this IP camera.

- **3GPP Streaming mode:**

3GPP Streaming is designed for specific mobile viewing. To receive video via 3gpp, please remember to enable rtsp server in the "Network Setting" page.

3GPP mode fixed setting: 176 x 144 resolution, 5FPS, Video compression: MPEG4, Audio compression: AMR.

- 3GPP Path: 3GPP output connecting route. If the IP address of your camera is 192.168.1.160 and you type in "3g" in the column, the 3GPP path will be **rtsp://192.168.1.160/3g**.

Audio/Video Setting >> Audio Setting

IP Camera supports 2-way audio. Audio can be received by the microphone connected with IP camera and transmitted to remote PC. User can also send audio from remote computer's microphone to IP Camera's external speaker.

- Two-Way Audio

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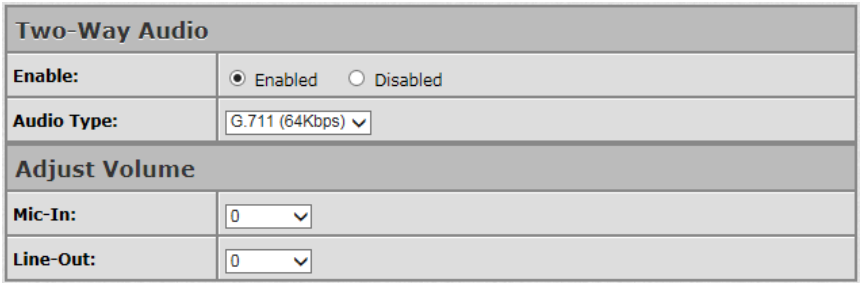
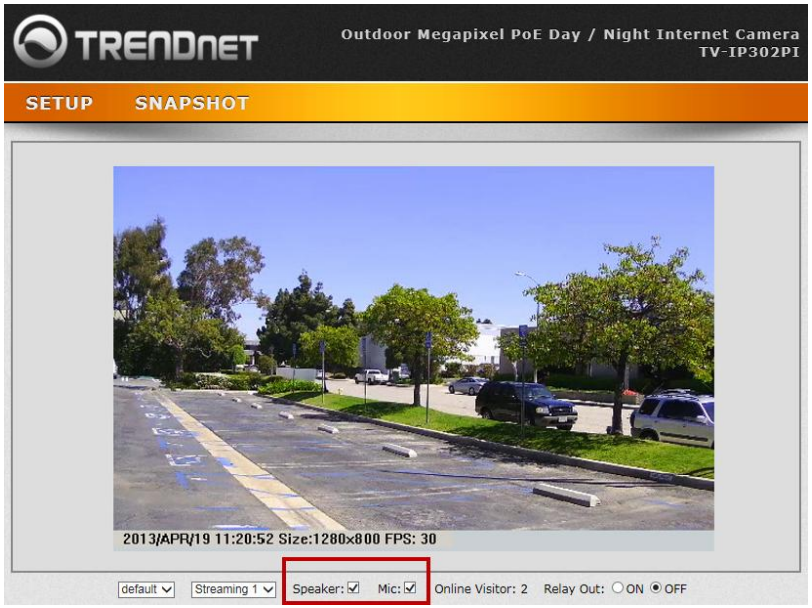
Select "Enable", then you can see "Mic" and "Speaker" options on the live page. The Audio compression format can be chosen from 3 options. You can also adjust the volume of 2-way audio.

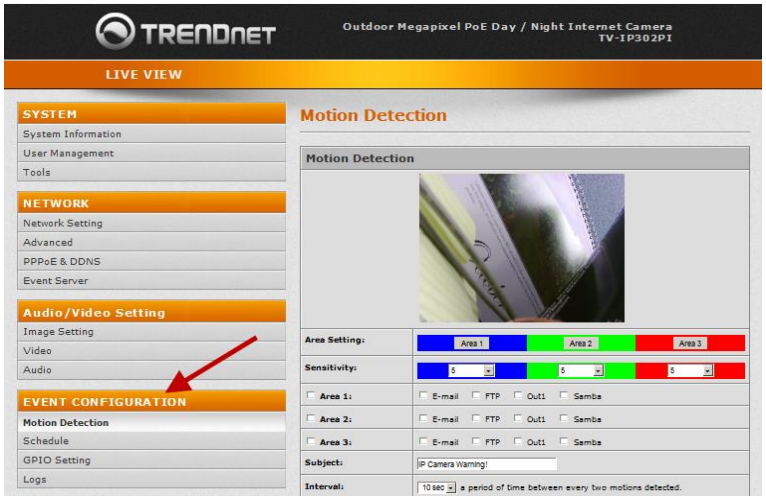


- Receive sound from IP Camera or speak to IP Camera

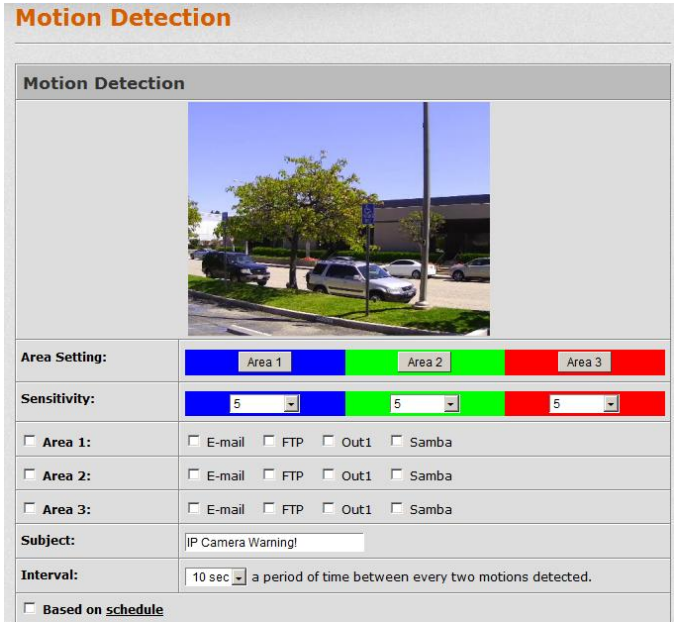
  Click "Mic" check box to receive sound from IP Camera and click "Speaker" to talk to IP camera side. Please ensure both IP camera and the computer sides have the microphone and speaker installed to have this function work properly.



EVENT CONFIGURATION



Event Configuration >> Motion Detection



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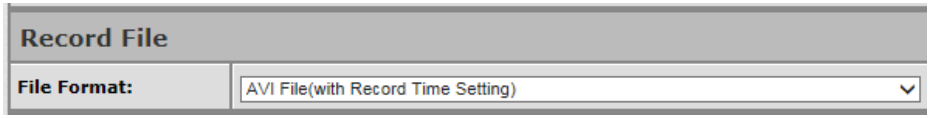
- **Area Setting**: Click **Area 1 /Area 2/Area 3** icon then draw the motion detection area on the live screen. If there is any motion detected in these areas, the "**Motion!**" wording will show on the live screen. To clean the motion detection area, click **Area 1 /Area 2/Area 3** icon again.
- **Sensitivity**: Select motion detection sensitivity from 1 to 10.
- **Trigger Action (Area 1, Area 2, Area 3)**: When motion is detected, the camera can send video or snapshot to Email, FTP, Output device and Samba.
- **Subject**: This subject will appear as the subject when sending the motion detected video or snapshot to email.
- **Interval**: Each motion triggered in defined interval time. If you select "10 sec" here, once the motion is detected and action is triggered, the next motion will be trigger after 10 seconds. .
- **Based on the schedule**: The motion detection will be triggered based on the schedule you define.

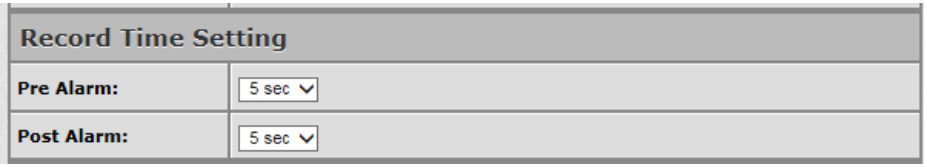
Event Configuration >> Motion Detection >> Record File



When an event happens, the IP camera can record a video clip or take snapshot, and then send the file to mail/ FTP/ Samba. Select what format you want to save.

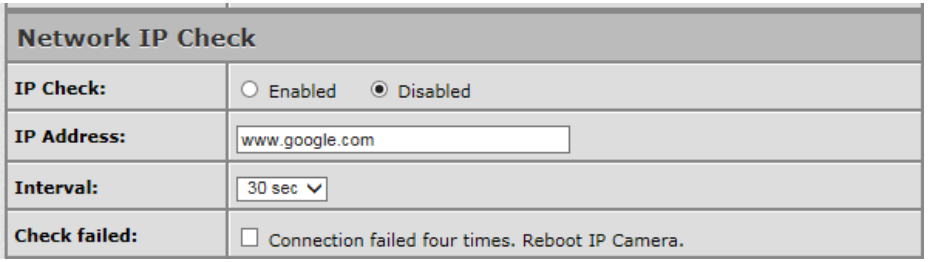
- AVI File (with Record Time Setting): Save AVI video file. The video length is according to the value you set in Record Time Setting.
- JPEG File (Single File with Interval Setting): Save single JPEG picture file when event happens.
- JPEG Files (with Record Time Setting): Only when you select "JPEG" in streaming 1 video format of Video Setting, this option can be enabled. Select this option to save several JPEG picture files, and the successive picture files cover a period of time according to the value you set in Record Time Setting.

Event Configuration >> Motion Detection >> Record Time Setting



When a event happens, the IP camera can record a video clip or take snapshot, and then send to mail/ FTP/ Samba. Select the video recording length before and after event happens.

Event Configuration >> Motion Detection >> Network IP Check



Enter the target IP address and interval. The camera will base on the interval time to check the target IP address. If PIN failed 4 times, the camera itself will reboot.

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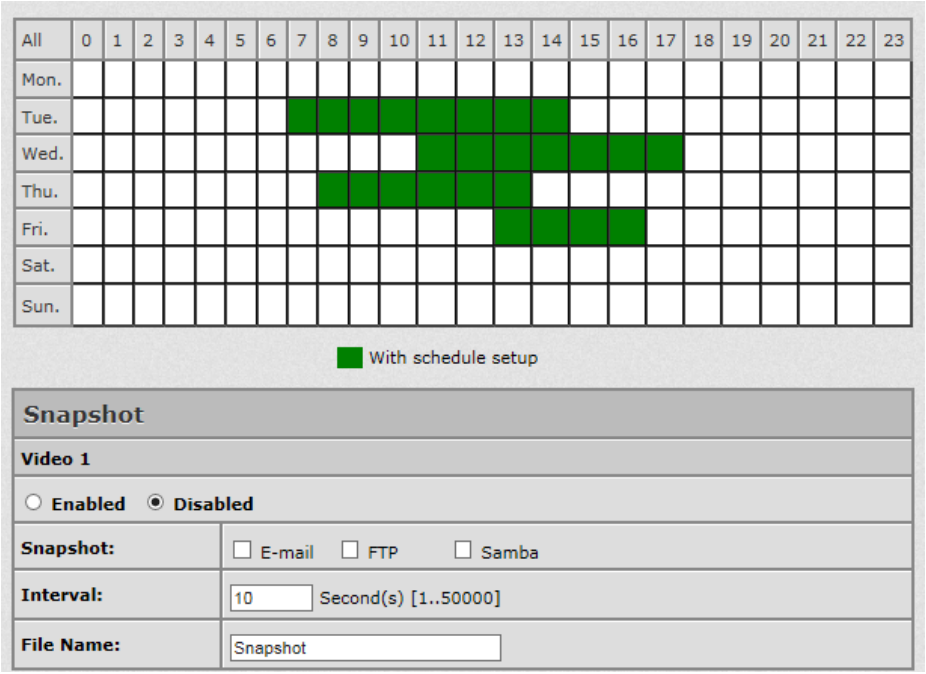
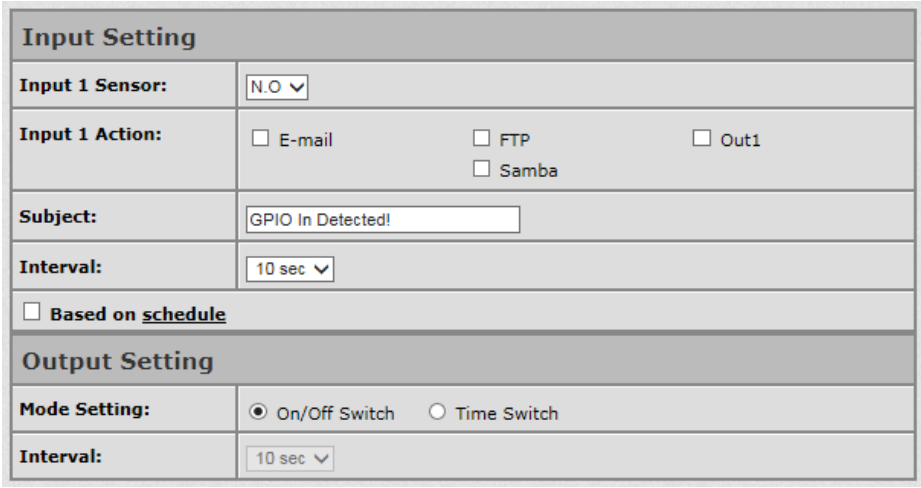
Event Configuration >> Schedule



- **Schedule**: Click on the week calendar to draw color. During the colored time, snapshot can be taken, and event trigger can be enabled if you do relevant settings.
- **Snapshot**: Enable the snapshot function, then IP camera will take snapshot according to schedule. Select the snapshot saving way: E-mail, FTP, or Samba.
- **Interval**: The interval between two snapshots.
- **File Name**: Give the snapshot file name. The saved file will be named as: "(file name) - (saving date) - (saving time)"

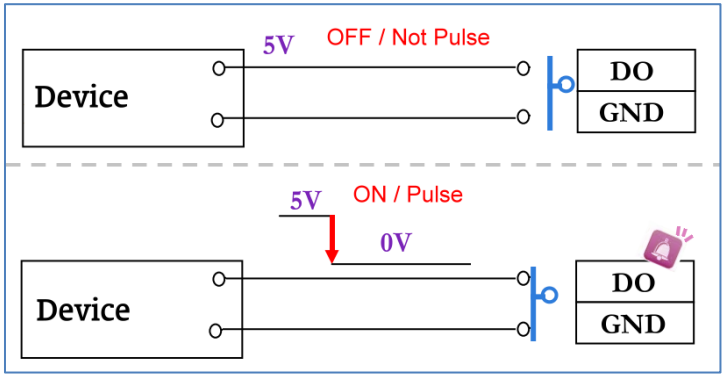
Event Configuration >> GPIO Setting



1. **I/O Connection**

- **Please connect the GND & DO pin to the external relay (buzzer) device**.

  When no event happens, DO output is 5V (DO and GND are disconnected). When the camera detects event happening and triggers external alarm, DO output is 0V (DO and GND are connected).



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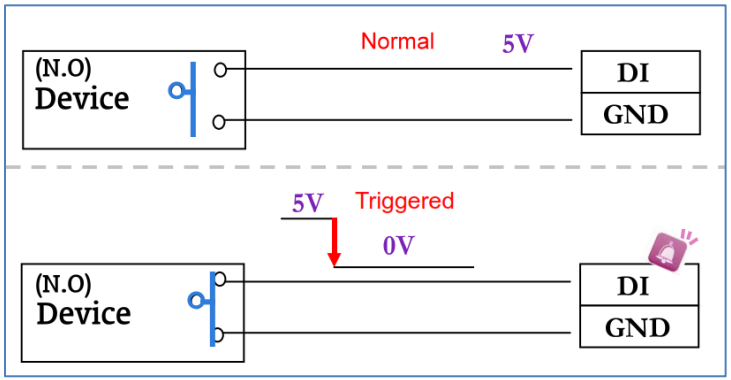
- **Please connect the GND & DI pin to the external trigger device.**

  If you select "N.O" in "Input sensor setting", when external devise or circuit makes DI and GND pin connected, the camera input alarm is triggered, and then camera will execute the action user has set, for example, send snapshot to E-mail address.

  If you select "N.C" in "Input sensor setting", when external devise or circuit makes DI and GND pin disconnected, the camera input alarm is triggered, and then camera will execute the action user has set, for example, send snapshot to E-mail address.



GPIO PIN definition

GND (Ground): Initial state is LOW

DO (Digital Output): DC 5V

DI (Digital Input): Max. 50mA, DC 5V

2. **GPIO Setting**

Event Configuration >> GPIO Setting >> Input Setting

- **Input Sensor**: According to your external device and circuit design, select N.O (normally open) or N.C (normally closed).
- **Input Action**: When the camera input alarm is triggered, it can trigger the relay out, or send the video to E-mail/ FTP/ SAMBA.
- **Interval**: If you select "10 sec" here, once the input alarm is detected and action is triggered, it cannot be triggered again within 10 seconds.
- **Based on the schedule**: When click the option box, only during the selected schedule time the I/O is enabled. That is, for example, the 11th hour of Monday has not been colored in the schedule table, then no action will be triggered even the camera detects input signal during 11:00~12:00 on Monday.

Event Configuration >> GPIO Setting >> Output Setting

- **Mode Setting**
  - On/Off Switch:

    When event happens, the camera triggers the external devise and lasts for certain of time according to the event "interval" setting. If it's triggered by motion detection, the triggering time is according to "interval" setting of motion detection. If it's triggered by external input alarm, the triggering time is according to input "interval" setting. It triggers the external devise and lasts for 10 seconds if you select "10" in interval setting. You can turn off the alarm manually by click "off" at the bottom-right of the live screen page.

  - Time Switch:

    When event happens, the camera triggers the external devise and lasts for certain of time according to the output "interval" setting, and the user is not allowed to break off the alarm manually.

3. **Output Test**

After the external output hardware is installed, you can use the "Relay Out" button on the live video page to test if DO device works.

- **On/Off Switch mode**:

  Click "ON", the camera will trigger the external output devise. For example, your alarm buzzer will continuously ring. You can manually break off the output signal by clicking "OFF".

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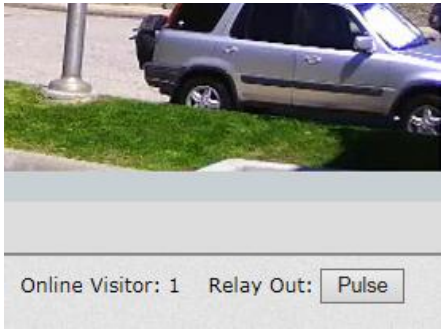
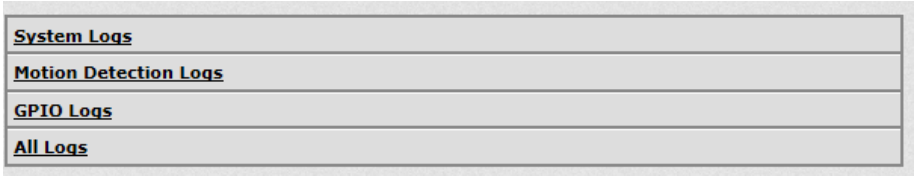
- **Time Switch mode:**

  Click "Pulse", the camera will trigger the external output devise for several seconds. The duration length is according to the "interval" setting in Output Setting.



Event Configuration >> Logs

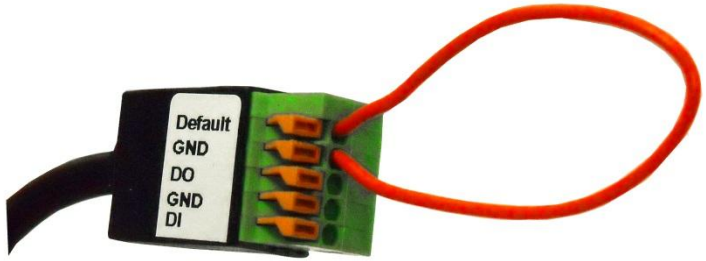


Click "Logs" to see **System Logs**, **Motion Detection Logs**, **GPIO Logs** and **All Logs**. If you remove the power from IP camera, **Motion Detection Logs** will be cleared away.

Factory Default

If you forget your password, please follow the steps to revert back to default value.

1. Remove the power and network cable.
2. Take the included Reset Wire Cable, plug one side of the wire into "Default" and the other side into "GND" on the terminal block as the picture below.



3. Connect power to the camera again. It takes around 30 seconds to boot the camera.
4. Remove the wire and plug in the network cable after the camera finishes booting.
5. If your camera is under a DHCP server, DHCP server will assign an IP automatically. Use IP Installer to find it. If you do not have a DHCP server, the default IP address of camera is 192.168.10.30. Default username is "admin" and password is "admin".

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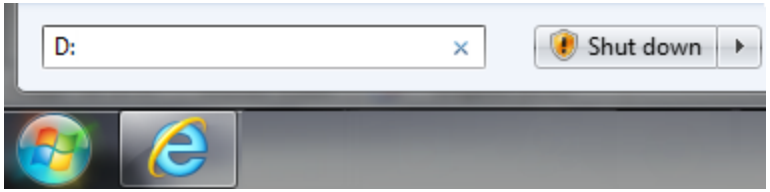
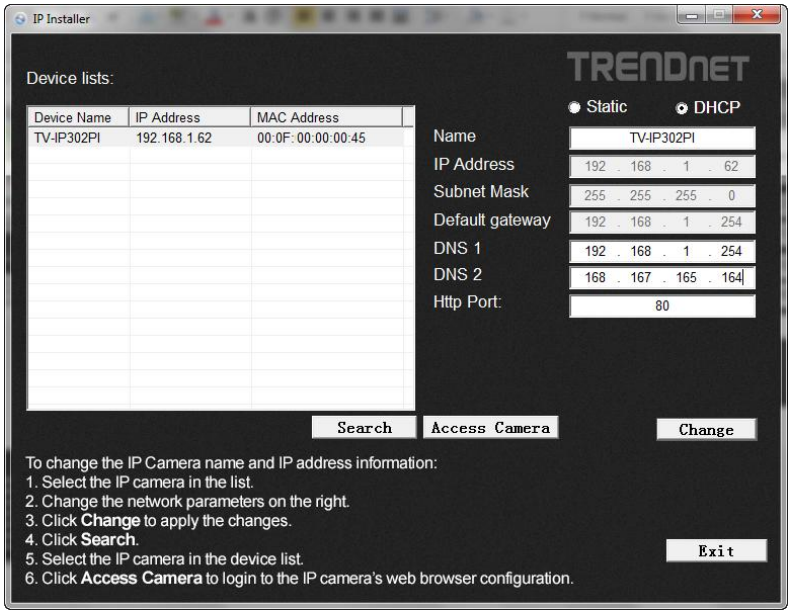
How to Access the IP camera via IP Installer

The IP Installer is an optional utility allow you to search the cameras in your network easily.

1. Insert the Installation CD-ROM into your computer's CD-ROM drive.
2. Click **Exit** if the Autorun pop up.
3. Go to Start >> type in D:\\ (D: is the letter assigned to your CD-ROM Drive, and then press the ENTER key on your keyboard .

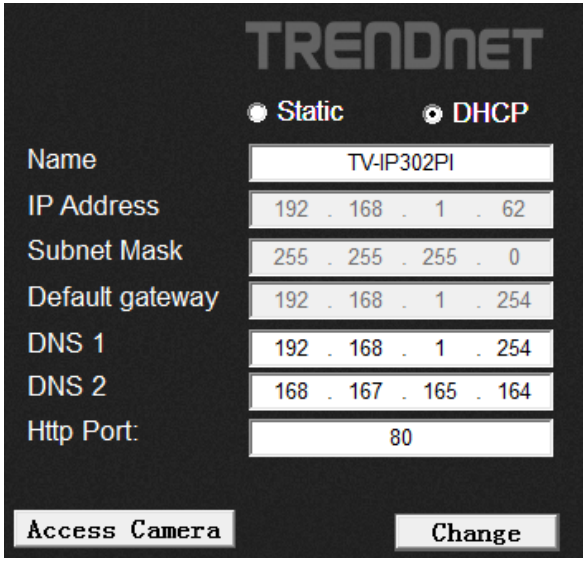


4. Click IPInstaller Folder and click **IP Installer.exe**
5. The main screen will pop up.



- **Search** : Search the IP Camera within the Network
- **Access Camera**: access the selected camera's web page.
- **Change** : change the selected camera's IP address via Static IP or DHCP.

  If Static is selected, you have to manual type in the IP address, Subnet Mask, Default gateway, DNS 1, DNS 2 and Http Port.



- **Exit**: Exit the IP Installer Utility.

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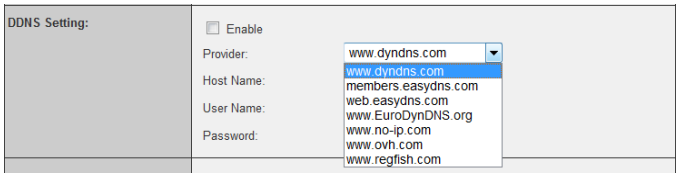
How to setup/access the camera behind a Router

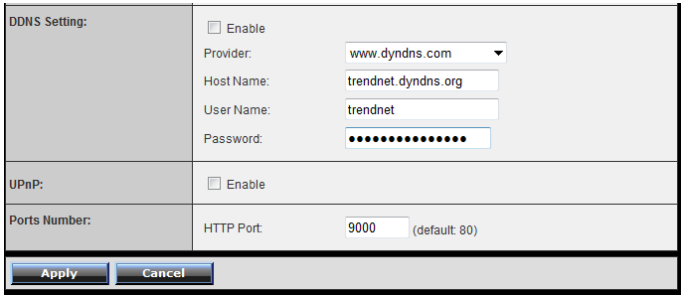
You can either setup the Dynamic DNS connection via camera itself or your home router. An account from any of the listed DDNS providers is required prior to this operation.

Configure DDNS on your Camera

1. Go to Camera's **DDNS Setting** page, click **Enable** to activate the feature. Then select a DDNS provider from the list.

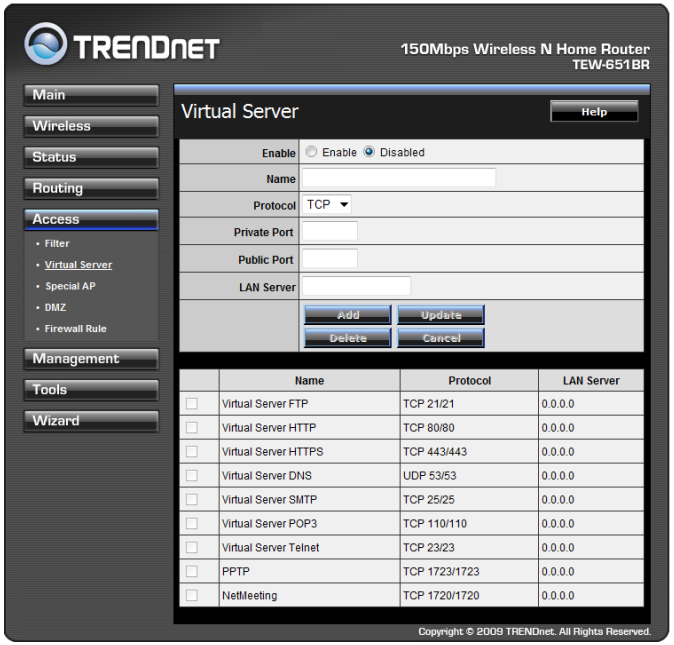


2. Enter your DDNS's the Host Name, User Name and Password.



3. In the **Port Number** section, assign an HTTP port of the camera. The default HTTP Port on the camera is 80. The example shows above is using port number 9000.

4. Open another web browser and go to your Router's Web Configuration page. (In the example, TRENDnet's TEW-651BR Wireless N router is used)



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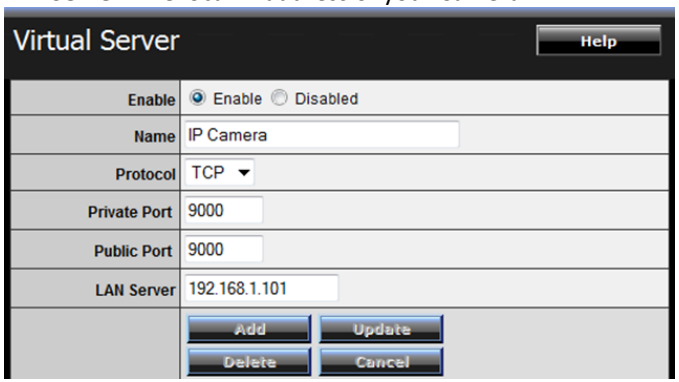
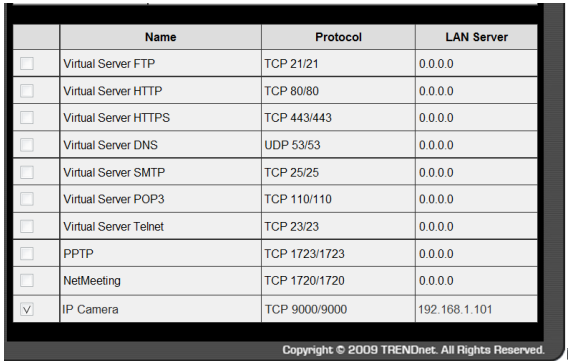
5. Go to **Virtual Server*** section and create a new entry.

Enable: Click **Enable**
Name: Enter the application name (eg. CameraName)
Protocol: Select **TCP**
Private Port: The HTTP port that you assign on your Camera.
Public Port: The port used on remote side to access to your Camera.
LAN Server: The local IP address of your Camera.



Then click **Add** to add the application.

* Please refer to your router's user's manual for detail **Virtual Server** setting. Some router might use **Port Forwarding** or **Special applications** for this function. The setup steps should be very similar.

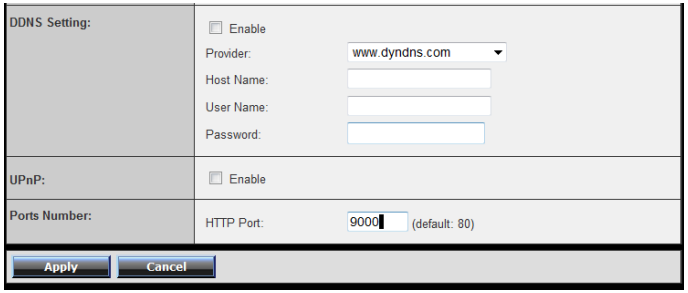


6. Open another web browser and enter your DDNS domain and camera's port number.
http://yourDomainName:PortNumber

7. Camera's login page will appear.

Configure DDNS on your router

1. Go to Camera's **DDNS → Ports Number** section, assign a HTTP port for your camera and click **Apply**.



2. Login to your router's web configuration page.

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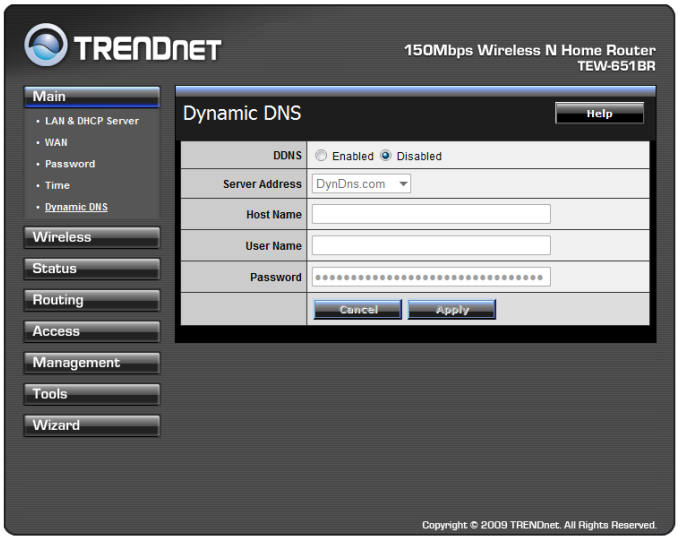
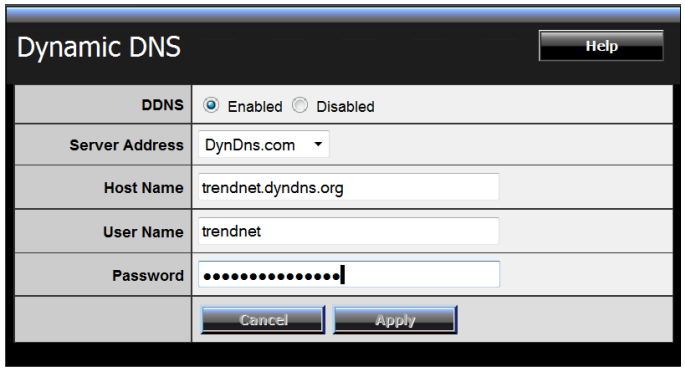
3. Find the **Dynamic DNS** configuration section.

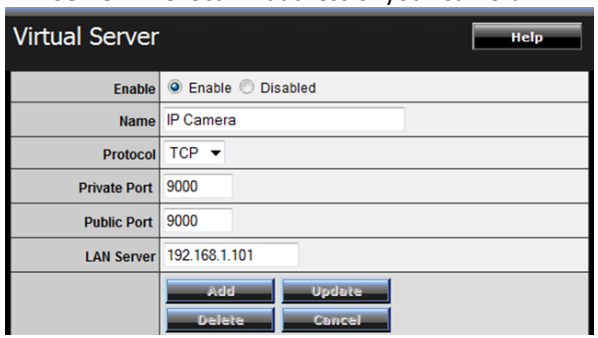


4. Enable DDNS, fill out the following information and then click **Apply**.



5. Go to **Virtual Server*** section and create a new entry.

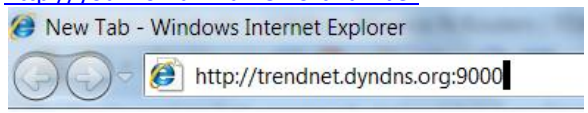
Enable: Click **Enable**
Name: Enter the application name (eg. Camera Name)
Protocol: Select **TCP**
Private Port: The HTTP port that you assign on your Camera.
Public Port: The port used on remote side to access to your Camera.
LAN Server: The local IP address of your Camera.



Click **Add** to add the application.

* Please refer to your router's user's manual for detail **Virtual Server** setting. Some router might use **Port Forwarding** or **Special applications** for this function. The setup steps should be very similar.

6. Open another web browser and enter your DDNS domain and camera's port number.
http://yourDomainName:PortNumber



7. The camera login page will appear.

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Technical Specifications

Video Features

Lens

- Focal Length: 4.2mm, F1.6
- Board Lens
- Sensor: ¼" Megapixel CMOS sensor
- Digital Zoom: 4X

Viewing Angle

- Diagonal: 62.9˚
- Horizontal: 53.1˚
- Vertical : 33.7˚

Minimum Illumination

- IR off : 0.5 lux
- IR on : 0 lux
- 15 meters IR illumination distance

Video Codecs / Resolution

- H.264: 1280 x 800 up to 30 fps
- MPEG4: 1280 x 800 up to 30 fps
- JPEG: 1280 x 800 up to 30 fps

Audio

- External microphone port
- External speaker port

Hardware

Standard

- IEEE 802.3u
- IEEE 802.3af

Device Interface

- 10/100Mbps PoE port
- LED indicator
- BNC Port
- Microphone Port
- Speaker Port
- GPIO terminal
- Power jack (optional)

Network Protocol

- IPv4, IPv6, UDP, TCP/ IP
- DHCP client, NTP client, DDNS client, SMTP client, FTP client
- SNMP, QoS/DSCP, IEEE 802.1X
- Samba, Bonjour
- HTTP, HTTPS
- PPPoE
- UPnP, RTSP, RTP 3GPP

Dimension

- Camera : 92 x 62 mm (3.62 x 2.44 in.)
- Weight : 450 g (without bracket); 535 g (with bracket)

Operating Temperature

- -20 ~ 50°C (-4 ~122°F)

Humidity

- Max 90% non-condensing

Power

- Input: 100 ~ 24 0 V AC , 1 A, 50~60 Hz
- Output: 12 V DC, 1 A external power adapter (for non-PoE installations)
- Max consumption : 6.24 W

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Warranty

- 3 years limited

Management Interface

Image Setting

- Brightness
- Contrast
- Hue
- Saturation
- Sharpness
- Auto Gain Control
- Shutter Time
- Sense-up
- Digital WDR
- Day & Night light sensor
- Flip
- Mirror
- Rotation 90 degree

Recording

- Event based
- Motion detection recording to email, FTP, GPIO trigger and Samba
- Scheduled recording to email, FTP and Samba

Snapshot

- Trigger event (motion detection)
- Send alert to email, FTP and / or Samba
- Real time s

Management Setting

- Maximum 22 user accounts
- Supports remote management

Compatibility

- Internet Explorer 8.0 or higher
- Firefox 12.0 or higher
- Chrome 19.0 or higher
- Safari 4 or higher

Camera Software

TRENDnetVIEW Pro

- Supports up to 32 cameras
- Multiple language support
- Set recording options (motion detection, schedule, event trigger)
- Search and playback
- Custom viewing modes and options

Compatibility

- Windows 7, Vista, XP, Windows Server 2003, 2008

TRENDnetVIEW, Mobile App

- View your camera from your portable device
- Take snapshots
- Zoom in & out
- 2 way audio

Compatibility

- iOS and Android

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Troubleshooting

1. **I inserted the Utility CD-ROM into my computer's CD-ROM Drive but the installation menu does not appear automatically. What should I do?**

Windows 8
If the installation menu does not appear automatically, press the windows icon and press "r" simultaneously. In the "run" box, type D:\autorun.exe, where "D" in "D:\autorun.exe" is the letter assigned to your CD-ROM Drive, and then press the ENTER key on your keyboard .

Windows 7
If the installation menu does not appear automatically, click on the Windows Icon on the bottom left hand corner of the screen, click the "Search programs and files" box, and type D:\autorun.exe, where "D" in "D:\autorun.exe" is the letter assigned to your CD-ROM Drive, and then press the ENTER key on your keyboard .

Windows Vista
If the installation menu does not appear automatically, click Start, click the Start Search box, and type D:\autorun.exe where "D" in "D:\autorun.exe" is the letter assigned to your CD-ROM Drive, and then press the ENTER key on your keyboard.

Windows XP
If the window does not appear automatically, click Start, click Run and type D:\autorun.exe where "D" in "D:\autorun.exe" is the letter assigned to your CD-ROM Drive, and then press the ENTER key on your keyboard.

2. **The autorun program is unable to detect my camera. What should I do?**

   a. Verify that you have followed all the steps in Section 2: Hardware Installation.
   b. Disable any software firewall programs such as ZoneAlarm or Norton Internet Security. If you are using Windows 8, 7, Vista or XP, disable the built in firewall.
   c. Reset the IP Camera
   d. Run the Autorun program from the CD-ROM again.

3. **I do not have a DHCP server or DHCP is disabled on my network and I am unable to configure the TV-IP302PI. What should I do?**

   a. Go to the TCP/IP settings on your computer and assign a static IP address on your computer's network adapter in the subnet of 192.168.10.x. Since the default IP address of the TV-IP302PI is 192.168.10.30, do not assign a static IP address of 192.168.10.30 on your computer's network adapter.
   b. Open Internet Explorer and enter http://192.168.10.30 into the address bar.

4. **The image is blurry. How can I adjust the focus on the IP camera?**

   The TV-IP302PI is designed to have a clear focus beyond 3 meters. The lens is not adjustable.

5. **When I click on Live View the image does not load, what should I do?**

   a. If you are using Internet Explorer, make sure that you install the ActiveX control WEBWATCH.cab.

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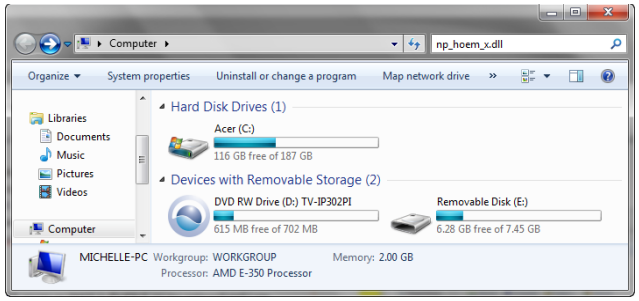
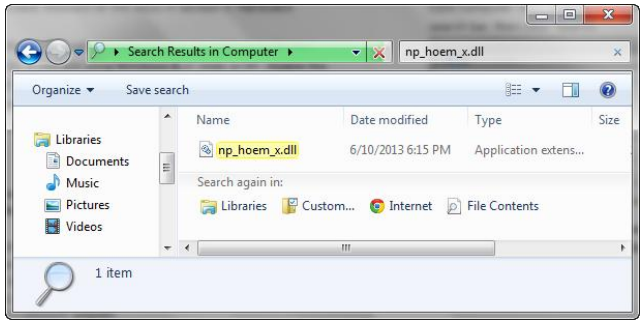
b. If you are using non-IE browser (Firefox, Chrome, Safari), make sure that you install the plug-in WebPlugin.exe.

6. **How do I uninstall the browser's Active X or Plug-in from my computer?**

Click Computer Icon, type in "np_hoem_x.dll" on the top-right corner of the search bar, then click "**Search**".



Delete the file named "**np_hoem_x.dll**" from search result.



Search for the additional ActiveX or plug-in files listed below and delete them to completely uninstall the ActiveX control or plug-in from your computer.

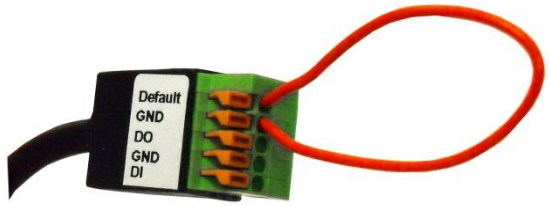
- avcodec-53_v1.8.dll
- avutil-51_v1.8.dll
- swscale-2_v1.8.dll
- WEBWATCH2
- WEBWATCH2.ocx

7. **I forgot my password. What should I do?**

Please follow the steps below to reset to factory default setting

a. Remove the power and network cable

b. Take the included Reset Wire Cable, plug one side of the wire into "Default" and the other side into "GND" on the terminal block as shown below.



c. Connect power to the camera again. It takes around 30 seconds to boot the camera.

d. Remove the wire and plug in the network cable after the camera finishes booting.

e. Run the Install Camera wizard from the CD-ROM to login to the camera.

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Limited Warranty

TRENDnet warrants its products against defects in material and workmanship, under normal use and service, for the following lengths of time from the date of purchase.

TV-IP302PI – 3 Years Limited Warranty

AC/DC Power Adapter, Cooling Fan, and Power Supply carry 1 year warranty.

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